

37TH CONGRESS, }
3d Session. }

SENATE.

{ REP. COM.
No. 89.

IN THE SENATE OF THE UNITED STATES.

FEBRUARY 14, 1863.—Ordered to be printed.

Mr. WILSON, from the Committee on Military Affairs and the Militia, submitted the following

REPORT.

The Committee on Military Affairs and the Militia, to whom was referred the petition of Dr. William T. G. Morton, asking compensation for the discovery and gift to his country and mankind of the application of ethereal vapor as a safe and practical anæsthesia, or pain-subduing agent, have had the same under consideration, and report:

That at the time of the alleged discovery, in 1846, and for a long and indefinite period prior thereto, means had been sought, and sometimes with success, to relieve and even to destroy pain in surgical operations. For this purpose opium, Indian hemp, mesmerism, and nitrous oxide gas and alcohol were used, and all in their turn abandoned, except that opium in many cases, and mesmerism in a few, still continued to be used with partial and imperfect success. But at that time there was not any safe and certain means of producing *anæsthesia* known to and used by the medical profession.

That in the years 1844, 1845, and 1846, the petitioner was extensively engaged in the practice of dentistry in the city of Boston; that he was at the same time a student in the medical college of that city, and attendant on the clinical lectures in the general hospital, and obtained his degree at the Washington University, Maryland. In his private practice and at the hospital he witnessed much human suffering, and in the clinical lectures the means of relieving it were considered and discussed, and Doctor Morton assisted in testing the efficacy of such as were tried in the medical class of which he was a member. Thus the status of science on that subject became well known to him—as well what it had accomplished as what it lacked. Everything, indeed, had been abandoned by the learned professors, and surgeons in that hospital, except the use of opium in few specific cases. It was deemed probable that there was something in nature which would produce certain, safe, and perfect anæsthesia, but it was too certain that it had not yet been discovered. The petitioner was thus led to investigation and experiment. The effect of ether when applied to the part, in relieving the pain of an aching tooth to which

he applied it in 1844, with a knowledge of the use of its vapor in college experiments, suggested the idea to him that the vapor of ether might furnish the much-desired and long-sought preventive of pain. Accordingly, during the summer of 1844 he tried experiments on animals, and continued the investigation until he succeeded, in rendering himself entirely unconscious by an experiment on himself in 1846, and became satisfied that it might be used with safety. He endeavored to prevail on his students to submit to the experiments, but they having heard accounts of occasional fatal effects in college experiments, refused to inhale it to the extent he desired. Chance at length threw in his way the means of *trying* and standing by and *witnessing* its effect on a human being, who was undisturbed by any preconceived opinions, whether hopes or fears.

On the 30th of September, 1846, a strong, robust man came into his office and asked to have a tooth extracted, and as he was unwilling to suffer pain, desired to be mesmerized. He was told that there was a better preventive, and he consented to have it applied. Doctor Morton administered the vapor of sulphuric ether, and the tooth was extracted without any expression, and, as the patient declared, without any sensation, of pain, and without any injurious consequence. Doctor Morton made numerous other successful experiments, which satisfied him of its safety and efficacy. It was almost immediately introduced into the medical hospital, at Doctor Morton's request, where, with a short interruption within the first month, it has been since constantly used with entire success. Having verified his discovery, he applied for and obtained a patent under the great seal of the United States. This was determined on as the best means of publicly verifying his right to the discovery, and of keeping this new and mysterious agent out of unskilful hands; but in order to extend its benefits to the utmost limits of safety, he at once gave free permission of its use to all public institutions which Doctor Warren, senior surgeon of the medical hospital of Boston, saw fit to name. He also invited all reliable members of the medical faculty to receive instructions and join in testing its value. All of those who now contest his right knew of his intended application before it was made, and, knowing, approved it. The specification, which the granting word of the patent cover, declares a preference for "the vapor of sulphuric ether to those of muriatic or other kinds of ether," but adds that "any such may be employed which will properly produce the state of insensibility, without any injurious consequences to the patient. This, of course, includes chloric ether, or chloric ether concentrated into chloroform. The sulphuric ether was preferred, because it is equally efficient and much more safe than chloric ether or chloroform.

This patent, in the opinion of your committee, ought to put forever at rest, between the United States and the petitioner, and between all who knew and approved of the application for the patent and the petitioner, all question as to the right of discovery of the thing patented. But, independently of this, there is ample evidence in the papers accompanying this report that the petitioner was the first and original discoverer of the vapor of ether as a safe and practical anæsthetic agent.

It is further shown, by evidence satisfactory to your committee, that the discovery was a source and cause not of profit or emolument to Dr. Morton, but of labor, anxiety, and heavy and ruinous expense and loss. The anæsthetic agent was assailed. It was represented as ruinous to the human constitution, and often fatal to life. The public were warned against its use, and Dr. Morton devoted years of his life, his patrimony, all the earnings of his past life, and all his credit, to put down and disabuse the public of the falsehood thus industriously circulated to its prejudice. He and a few generous friends who came to his aid alone strove with the tide which set so strongly against the discovery. Neither of those who now contest his right lifted a finger to aid, until he finally prevailed, but assailed it. The vapor of ether as an anæsthetic agent was acknowledged, and received and used throughout the civilized world. It was used in all the hospitals of the United States, and by all the surgeons in the army and navy of the United States. Thus the Executive of the United States seized and used this discovery without license or reward, and regardless of its own patent—an example which the multitude readily followed, though the patent had kept the discovery out of the hands of quacks until it had been fully and fairly tested. But this brought no relief to the discoverer; and every quack and pretender, wheresoever they practiced, following the example of the United States authorities, used the pain-destroying agent, without regard to the rights of the patentee. Dr. Morton then determined to apply to his country for compensation and redress.

From 1849 to 1854, inclusive, two reports were made by committees of the House, affirming the right of Dr. Morton, and recommending compensation. They are elaborate and carefully considered reports, founded upon a great mass of testimony, taken as well by Dr. Morton to support his claim as by the several contestants to destroy it; and after carefully considering and weighing the testimony and the acts of the several parties at the time of the discovery, and immediately subsequent thereto, they reported in favor of his claim, and recommended compensation; and they reported bills, which were buried and lost in the mass of unfinished business.

Two committees of the Senate—the Committees on Military and Naval Affairs—concurred in the reports of the committee of the House. A bill granting relief generally to the discoverer passed the Senate in 1853, and again in 1854. One of these shared the fate of the House bills—buried like them in the mass of unfinished business. The other was rejected in the confusion of a midnight session.

Worn out, and hopeless of the action of Congress, Dr. Morton memorialized the President of the United States, praying him to give compensation for the use of the *anæsthesia*, the *patented article*, or to cease to use it in the army and navy. The President received the application, and was about to order a just and liberal compensation, when the Secretary of War, Jefferson Davis, induced him to require, as a pre-requisite, a suit in one of the federal courts, and a judgment then against an army or navy surgeon for using it. Dr. Morton brought suit, recovered judgment against a surgeon of a marine hospital, and in due time, but after a change of administration, produced the record of the judgment, presented it to Howell Cobb, then head

of the Treasury Department, to which the hospital belonged, who hesitated for a time, and at last refused, to carry out the order of the President. So the Executive refused compensation, and continued to use the discovery, as theretofore. This memorial to the President was backed by the signatures of a majority of the members of each house of Congress. In the meantime the patent was drawing to a close, and Dr. Morton determined to apply for an extension, under the hope that Congress or the Executive would yet be induced to recognize and respect his rights under it at some time within and during the extended term; but the extension was denied him because of some technical formality with which he could not comply. Your committee, however, consider his claim as valid against the United States, in equity and good conscience, as it would have been if no such difficulty had been interposed, and the patent had been extended according to usual practice of the office in ordinary cases.

Congress having done nothing, the right of Dr. Morton to the discovery was examined, and, after most careful investigation, vouched by the medical and surgical faculties of Boston, New York, and Philadelphia, the *elite* of the profession joined in attestation of the great merits of the discovery; and they express an unqualified judgment that Dr. Morton is entitled to the credit of the discovery, and of perfecting and giving it to the world. And as evidence that this is not mere words of compliment, they vouched their opinion by a generous effort to procure subscriptions to relieve the embarrassment in which Dr. Morton was involved by his devoted self-sacrifice.

The examination of this question, and the consequent judgment and subscription, originated with the medical faculty of Boston; and as they had all the means derived from a knowledge of parties, of witnesses, and the acts of parties during the doubtful period of the discovery, when no man could tell whether it was or was not of value, their decision may be properly considered as the verdict of a highly-intelligent jury of the vicinage, and as such, your committee give it great weight. And its value is enhanced by the fact that the faculties of New York and Philadelphia, on a re-examination of the question, concurred in this judgment. The Institute of France awarded to Dr. Morton their largest gold medal. This would seem conclusive, even if it were not, as your committee think it is, fully sustained by independent proof.

But the subscriptions procured by medical and surgical faculties liberal though they were, fall far short of a sum sufficient to indemnify Dr. Morton for his expenditures of time and money in pursuit of the discovery, and in giving it to the public under conditions which would command public confidence. Nor is it just that this single profession should take upon itself, by its extraordinary efforts, the burden of rewarding and sustaining a discovery by which the nation has been, and is now especially, so largely benefited. Who shall estimate its value to the army and navy of the United States? For what sum would the government now consent for a single year, or even after a single battle, to forego its use? It is in proof before us that Dr. Morton himself administered his *nepenthe* to more than a hundred wounded soldiers fresh from the battle-field of Fredericksburg, and with three minutes to the man, and without a single failure, prepared them all for a pain-

operation with the probe and the knife. His *nepenthe* is used in all operations in the army and navy, and we are safe in saying that a sum which could be named would induce the United States to forego its use.

It was used for fourteen years, as far back as the Mexican war, and down to the expiration of the patent. To his legal right to indemnity and compensation for *this*, no one who regards the mandates and prohibitions of the Constitution can doubt. The legal liability of the United States for this has been judicially determined in the suit above referred to. This is independent of all consideration of merit in the discovery. It is a legal right; it is property; and it is all the property the petitioner has left to him. It has been taken by the United States, and it has been applied to public use. It is debt due Dr. Morton, and long withheld. He is, also, in the opinion of your committee, entitled equally to compensation for its use to the present time, and, hereafter, down to the expiration of an extended patent, according to ordinary law and the usage of the department; and he is entitled, not in strict law or, perhaps, in legal equity, but in sound political morality, to liberal consideration for the priceless service which he has rendered to his country and its people in every condition of life. We are satisfied that Dr. Morton is the discoverer. We think him entitled to liberal compensation and reward, in accordance with the usages of this and other governments in such cases.

The only question as to this claim is the amount. A bill twice passed the Senate appropriating a hundred thousand dollars to the discoverer. Former committees and heads of departments, at a time when there was not a tithe of the evidence that the use of the discovery by the United States now furnishes of its value to the government, reported in favor of and recommended appropriating one hundred thousand dollars to enable the President of the United States to procure the surrender of Dr. Morton's patent.

The medical faculty say "its value is such that, if it were only to be purchased with large sums of money, millions of dollars would readily and properly be paid by persons who are subjects of the pain the discovery is competent to avert or relieve;" and "that Dr. Morton ought to have a monument of gold as high as Trinity Church steeple." Though it may be utterly impossible to determine the proper bounds within which merit is to be rewarded in a case like the present, in which an humble individual is the donor and the whole nation the recipient, we can appropriate a sum of money which will reimburse and indemnify him for expenses and sacrifices in bestowing this boon, and place his future life beyond the reach of poverty, and in this manner do justice to ourselves.

An account stated, supported by satisfactory evidence, shows that Dr. Morton has expended in money, and time, and sacrifice of professional business, more than two hundred thousand dollars in discovering, defending the discovery and his rights thereto, and perfecting and giving the nation this pain-destroying agent.

Your committee are of the opinion that some compensation is due, and they report these facts for the information of the Senate, without recommendation.

Your committee herewith report, as an appendix, a narrative of the discovery, and Dr. Morton's connexion with it.—(Appendix A.)

An analysis of the testimony of contestants for the honor of the discovery.—(Appendix B.)

Extracts from the reasoned report of the committee of the House of Representatives of 1849; and extracts, with notes appended, from the agreed report of 1852, signed by a majority of the members, and certified by the then clerk of the House of Representatives, but not presented for the want of opportunity.—(Appendix C.)

Also extracts from a large mass of evidence on which all the reports are mainly founded;—the acts and proceedings of the medical and surgical associations of Boston, New York, and Philadelphia, referred to above;—an account stated, with proof of its approximate correctness, showing the expenditures in time and money of Dr. Morton in making and giving to the public his discovery;—reports from the Secretaries of War and of the Navy, the surgical bureaux, the surgeons of the army and navy, and members of the medical profession showing the extent to which the *nepenthe* is used, and the estimation in which it is held, and recommending compensation;—and a summing-up of the abstract question of discovery. As the appendix is voluminous, they have directed that an index be prepared and appended to facilitate its examination.

APPENDIX.

LIBRARY
BALTIMORE COLLEGE OF
DENTAL SURGERY

A.

The Committee on Military Affairs, to whom was referred the memorial of Dr. William T. G. Morton, asking remuneration from Congress for the discovery and gift to his country and to mankind of practical anæsthesia, have had the same under consideration, and report, as an appendix to the foregoing report:

That in order to arrive at a just conclusion as to the fact of the discovery and its true value, your committee examined with care the state of medical and surgical science in that department at the time of the pursuit, experiments and alleged discovery by the petitioner, which was during the years 1844-'45-'46; and they find that from the earliest times, and at all times within the historical period, some means have been known and used to deaden or destroy the sensation of pain in severe surgical operations, and in some cases where death was inflicted by lingering torture, a few cases taken from writers of different periods will sufficiently establish this position.

Pliny, the naturalist, who perished in the destruction of Herculaneum in A. D. 79, in describing the plant mandragora, says, "It has a soporific power on the faculties of those who drink it; the ordinary portion is half a cup. It is drank against serpents, and before cutting and puncturing, 1st they should be felt." When he speaks of the plant *cruca*, called by us the *rocket*, he says that its seeds, when drank in wine by criminals about to undergo the lash, produce a sort of callousness or induration of feeling.

Dioscorides the great physician of Cilicia, in Asia, states, in his chapter on the mandragora:

"Some boil down the roots in wine to a third part, and preserve the juice thus procured, and give one cyathus of it to *cause the insensibility of those who are to be cut or cauterized.*"

Besides this decoction, he speaks also of a wine made from the bark of this same root, which was to be used for the same purpose. Speaking of another variety of mandragora, called *morion*, he observes, "medical men use it also for those who are to be cut or cauterized."

Matthioli, the commentator on Dioscorides, confirms all his various statements, which are subsequently vouched for by Dodoneous, who states that "wine, in which the roots of mandragora have been steeped, brings on sleep, and appeases all pains; so that it is given to those who are to be cut, sawed, or burned in any parts of their body, that they may not perceive pain."

Apuleius, of Madaura, who lived about a century later than Pliny, writes: "If any one is to have a member mutilated, burned or sawed, let him drink half an ounce with wine, and *let him sleep on till the member is cut away, without any pain or sensation.*"

A work on the pharmacopeia and medicine, entitled *Kon-ken-i-tong*, or general collection of ancient and modern medicine, which belongs to the Bibliothèque Imperial at Paris, has prefixed to it biographical sketches of several hundred of the most distinguished physicians of China. Under the biographical notice *Hoatho*, who flourished under the dynasty of *Wei*—that is, between the years 220 and 230 of our era—occurs the following passage:

"But if the disease resided in parts upon which the needle, the *mora*, or liquid medicaments could not operate—for example, in the bones, or the marrow of the bones, in the stomach, or the intestines, he gave the patient a preparation of hemp, (in the Chinese, *ma-yo*,) and after a few moments he became as insensible as if he had been drunk or dead. Then, as the case required, he performed operations, incisions, or amputations, and removed the cause of the

malady; then he brought together and secured the tissues, and applied liniments. After a certain number of days the patient recovered *without having experienced, during the operation, the slightest pain.*"

This *ma-yo* employed by *Hoatho*, also called *Hans*, *mafo-san*, or hemp-essence powder, the same drug as mentioned by Herodotus twenty-three centuries ago, is the *cannabis indica*, the *haschisch* or *hasheesh* of the east, now much cultivated and used there for the preparation of *Bhang*, the intoxicating effects of which, and the terrible results of its use have been so often described. "This," wrote Sir Joseph Banks, about the commencement of this century, "is prepared, and, I believe, used in all parts of the east, from Morocco to China. In Barbary it is always taken, if it can be procured, by criminals condemned to suffer amputation; and it is said to enable those miserales to bear the rough operations of an unfeeling executioner, more than we Europeans can the keen knife of our most skilful surgeons."

But all these pain-assuaging drugs, if used improperly and to excess, as they frequently are, first to relieve pain, then produce pleasurable sensations, tend to destroy the nervous system, and generally produce insanity or death. Such is especially the case with alcohol and Indian hemp, or haschisch. It is recorded in a modern journal of medicine:

More than one-half of the natives received provisionally into the insane wards of the civil hospital in Algiers have been smokers of haschisch or eaters of *maad-jaun*, and scarcely one of them is ever found to recover.*

But in the hands of skilful surgeons, they have at all times produced, to a limited extent, a salutary effect. Theodoric, who died in 1298, ordered the inhalation of an anodyne vapor, to prevent pain, by means of a "*spongia somnifera*," (or sleeping ball,) as it is called in the rubric. Hugo, of Lucca, who was the teacher of Theodoric, and had often used it, thus describes its preparation: "Take of opium and the juice of unripe mulberry, of hyoscyamus, of the juice of the hemlock, of the juice of the leaves of the mandragora, of the juice of the woody ivy, of the juice of the forest mulberry, of the seeds of lettuce, of the seed of the burdock, which has large and round apples, and of the water-hemlock, each one ounce; mix the whole of these together in a brazen vessel, and then in it place a new sponge, and let the whole boil, and as long as the sun on the dog-days, till it (the sponge) consumes it all, and let it be boiled away in it. As often as there is need of it place this same sponge into warm water for one hour, and let it be applied to the nostrils till he who is to be operated on (*qui incidendus est*) has fallen asleep, and in this state let the operation be performed, (*et sic fiat chirurgia*.) When this is finished, in order to rouse him, place another dipped in vinegar frequently to his nose, or let the juice of the roots of fenigreek be squirted into his nostrils. Presently he awakens."

M. Dauriol, a French physician residing in the neighborhood of Toulouse, asserts that, in 1832, he followed the directions given by Theodoric, and operated several times with success. He even reports five cases of painless operations.

According to the statements of many writers, during the fourteenth, fifteenth, and sixteenth centuries it was the custom to give criminals about to undergo the torture a compound which deadened their sensibility. This is borne witness to by Nicholas Eymerie, grand inquisitor of Aragon.

This was also the opinion of Pegna, who commented the work of Eymerie in 1578, who attributed it to sorcery. In 1524 Hippolitus, professor of jurisprudence at Bologna, wrote, in his Criminal Practice, that he had seen accused persons, as it were, asleep, under the most cruel tortures; and in such a stupor as resembles the action of narcotic medicines. This result is regretted by Tabonneau, a contemporary of Pegna, who complained that it had become almost

*"Journal de Medicine et de Chirurgie Pratique," and Medico-Chirurgical Review." 1858.

useless to apply the tortur, for the means of stupefaction being known to every jailor, they seldom fail to impart the benefit of their secret to the wretches put to the question.

Although at this time the means of deadening sensibility by drugs were so well known to the criminals and their jailors, it does not appear that their use to relieve pain during operations was by any means common. It is probable the deadly results which must have often ensued from their use, the long-continued depression which they exert upon the nervous system, the confirmed stupor, and the congestions and other accidents which are so liable to follow, all conspired to prevent their use or even examination by the surgeons.

Guy de Chauliac, or Chaulieu, and Brunus, are the only ones during this period who refer in their medical works to agents to relieve pain. But as especial reference is made by them to their bad effects and the danger of producing asphyxia, congestions, and death, it is probable that they were seldom and most unsuccessfully employed.

J. Canape, or Canappe, physician to Francis I, wrote a work in which he speaks of the procedure of Theodoric and others, and thus refers to the dangers of the internal administration of narcotics: "*Les autres donnent opium à boire, et font mal, spécialement s'il est jeune, et l'aperçoivent; car c'est avec une grande bataille de vertu animale et naturelle. J'ai oui qu'ils encourent manie, et part consequent, la mort.*"

The celebrated French surgeon, Ambrose Pare, toward the close of the same century, mentions that a decoction of mandragora, "to avert the pain attendant upon the amputation of a limb," was "formerly used." In 1579 an English author, Bulleyn, stated that it was impossible to put a patient into an anæsthetic state during the operation of lithotomy, but speaks of the sleep produced as "a trance, or a deepe terrible dreame."

Many of the older authors affected a secrecy and mystery as regards these preparations. Baptista Porta describes a "*pomum somnificum*," (a sleeping apple,) "the smelling of which binds the eyes with a deep sleep." He states that there can be extracted from plants "a quintessence which must be kept in leaden vessels, very closely stopped that it may not have the least vent, lest it fly out. When you would use it, uncover it and hold it to a sleeping man's nostrils, whose breath will suck up this subtle essence, which will so besiege the castle of his senses that he will be overwhelmed with a most profound sleep, not to be shook off without much labor. After sleep no heaviness will remain in his head, nor any suspicion of art. These things," he adds, "are manifest to a wise physician; to a wicked one obscure."

Meisner gives in detail an account of a secret remedy given toward the close of the seventeenth century, by Weiss, to Augustus II., King of Poland, which produced such a perfect state of anæsthesia that the King's deceased foot was amputated without his feeling it. The operation was performed without the royal patient's consent, and was not discovered by him until the following morning.

In the tragedy of "Women Beware Woman," written by Middleton, and published in 1657, he alludes in the following terms to anæsthesia in surgery:

"I'll imitate the pities of old surgeons
To this lost limit, who, ere they show their art,
Cast one asleep, then cut the diseased part,"

Of all the narcotics which have been employed to relieve pain, opium (which Van Helmont calls the "*specific gift of the Creator*") and its various preparations has been the longest time in vogue, and with by far the most certain and satisfactory results. Theodoric and Guy de Chauliac gave it internally, and many other surgeons have constantly since advocated its use. Up to the time of the discovery of etherization it was in reality the only means relied upon to deaden the anguish of an operation; it was the custom to administer a large

dose, but one varied according to the age, to the patient a short time previous to the commencement of the operation; and, if grave, it was never begun until the effects manifested themselves. Although the effect was never pushed to the state of stupefaction, and consequently a great degree of pain could be felt, it could never be looked upon as a reliable or safe agent. The uncertainty of the time or power of its action; the delirious excitement which it often occasioned instead of insensibility; its really poisonous properties, and the subsequent troubles which it rendered liable—all conspired to render its use as seldom as possible, and then only for extreme cases.

In the year 1828 M. Girardin read a letter before the Academy of Medicine, addressed to his Majesty Charles X., by Mr. Hickman, of London, in which he asserted that he could, by introducing certain gases into the lungs of the patient, perform the most painful and dangerous operations without his feeling it in the slightest degree. The proposition of Mr. Hickman met with little or no favor in France, and even in England all the experiments made by him were attended with very poor success.

Nothing is known with certainty as to the gas which he used. Down to this time the great discovery had not been made. As late as 1839 M. Velpeau wrote:

"To escape pain in surgical operations is a chimera which we are not permitted to look for in our day. A cutting instrument and pain, in operative medicine, are two words which never present themselves the one without the other, in the mind of patients, and it is necessary for us surgeons to admit their association."

But there has been and there continues to occur many cases in which the pain of operations was alleviated, if not entirely destroyed, by stimulants, by sedatives, and by mental preparation, and the faculty, with little faith in mesmerism, did not entirely reject even it in practice. It was very common opinion in the profession that pain *could be* destroyed in surgical operations, while it was quite clear that no safe and certain means had yet been found to effect the object. In this state of science and opinion it were no new discovery to find and prove that the pain of an operation might be, in some cases, alleviated or destroyed by physical appliances, or mental preparation, or both combined. The *desideratum* was some physical appliance, easy to be administered, and safe, certain, and uniform in its operation. Nothing short of this could be received and adopted by the profession, and this had not yet been discovered.

In 1844 Mr. James Braid, surgeon of Manchester, England, published a work entitled "Neurypnology or Hypnotism, or the Rationale of Nervous Sleep, considered in relation to Animal Magnetism." He claimed in this work to have made a discovery precisely similar to that claimed by M. Rocca. He maintained that the chief phenomenon of mesmerism, the state of catalepsy or insensibility, could be produced in most persons by fixing the eyes on a bright point, at a given distance, before and above the eyes, and that in the condition thus produced surgical operations could be performed without pain to the patient. The mesmerizers replied that his discovery was no discovery at all; that they had long been familiar with the phenomena he described, which did not at all invalidate the claims of mesmerism. And they declared that they had long been in the habit of performing painless operations upon persons in the state of catalepsy, induced by mesmeric influences. In a book entitled the "History and Philosophy of Animal Magnetism," published in Boston in 1843, a year before Braid's book appeared, we find the following statements:

"Dr. Shattuck, of Lowell, has been very successful as a magnetizer, and has made some new and valuable discoveries in the science. A large tumor was extracted from the shoulder of a lady, whom he had magnetized at a public lecture in Lowell, without causing the slightest pain. The incision was made to the depth of two inches. This experiment was performed under the direct

personal inspection of three or four other physicians, who admitted the astonishing insensibility of the patient. Mr. Silas Allen, of Boston, recently magnetized a lady who had broken an arm, and the fracture was set by Dr. Hewett while she was in this state without pain. In this state some persons are entirely insensible to pain in every part of the body. You may pierce their flesh with knives, pull out their teeth, canterize them with a hot iron, apply the most powerful caustic to their flesh, or give them an electric shock which would cause instant death in the natural state, but they appear totally unconscious of your attacks. The wonderful insensibility of some persons in the magnetic state has been tested by experiments which place the fact beyond dispute. Teeth are every day extracted while the patients are under this influence without pain. Tumors have been cut out, limbs set, and other painful operations performed, which could not otherwise be endured."

In 1799 Sir Humphrey Davy commenced experimenting with *nitrous oxide*. He suggested its capability of destroying physical pain, and that it might "probably be used in surgical operations in which no great effusion of blood takes place." But there is no evidence that he or any one else tested this theory until quite a recent date.

Dr. Martin Gay, in 1847, says:

"An attempt was made, without success, four or five years ago, by some students at Cambridge, to perform the operation of extracting teeth upon one or two of their companions who were under the influence of nitrous oxide. In one instance the subject, while under the influence of the gas, made his escape, and was with difficulty caught. A peculiarly pugnacious state of feeling had been induced; certainly not the condition in which to undergo a delicate surgical operation." Horace Wells, in 1844, employed it for producing temporary unconsciousness while extracting teeth, and found it to produce exhilaration out of proportion to its anæsthetic properties, and the hopes founded upon it proved nugatory and delusive, but we shall have more to say of this in the sequel. In like manner faded away the hopes founded upon mesmerism. Up to the time we are writing, and two or three years later exhibitions of the nitrous oxide gas and animal magnetism were held throughout the New England States for the purpose of amusement.

Though these experiments had produced no safe, efficacious, and unobjectionable means of performing operations without pain, they afforded daily stimulus to those experimenting in that direction.

Your petitioner, Wm. T. G. Morton, M. D., attended the lectures of the Massachusetts Medical College, obtained his medical degree at the Washington University, Maryland. Dr. John C. Warren, one of the professors who delivered surgical lectures at the Massachusetts Medical College at this period, says: "The discovery of a mode of preventing pain was annually alluded to in his lectures. Trials were made with all the plans calculated to accomplish that end, opiates and stimulants were given freely, and experiments made with animal magnetism and nitrous oxide, or laughing gas. Dr. Morton personally assisted in demonstrating the utility of some of these agents before the Medical class of which he was then a member.

While searching for something to supply the want in question, a young lady, a Miss Parrot, of Gloucester, came under his care, who suffered such intense pain in the tooth that endurance seemed impossible. Among a lot of books which Dr. Morton purchased on the 3d of May, 1845, was the following, which contained in a condensed form what was known by the profession as to its use in medicine, Pereira's *Materia Medica*, in which it is stated that "the vapor of ether is inhaled in spasmodic asthma, chronic catarrh and dyspepsia, whooping cough, and to relieve the effects caused by the accidental inhalation of chlorine gas."

"When the vapor of ether, sufficiently diluted with atmospheric air, is inhaled,

it causes irritation about the epiglottis, a sensation of fullness in the head, and a succession of effects analogous to those caused by the protoxide of nitrogen, and persons peculiarly susceptible of the action of the one are also powerfully affected by the other. If the air be too strongly impregnated with ether, stupefaction ensues. In one case this state continued, with occasional periods of intermission, for more than thirty hours; for many days the pulse was so much lowered that considerable fears were entertained for the safety of the patient. In another case, an apoplectic condition, which continued for some hours, was produced."

Another book, Hooper's Medical Dictionary, under the head of Ether, says: "Applied externally, it is of service in *headache, toothache, and other painful affections*. * * * * If it be prevented from evaporating by covering the place to which it is applied closely with the hand, it proves a powerful stimulant and rubefacient, and excites a sensation of burning heat, as is the case with solutions of camphor in alcohol or turpentine. In this way it is frequently used for removing pains in the head or teeth." Dr. Morton applied this prescription to the diseased tooth of his patient freely and often, keeping it sealed up in the hollow tooth. On introducing the instrument in the cavity of the tooth in search of the sensitive portion of the bone, he found the patient experienced no pain whatever, but to his surprise the surrounding parts were benumbed. The thought flashed across him, if one part can thus be brought under the influence of ether, why not the whole system? He was in a situation well calculated to work out this problem. At this period he was attending the lectures of the Massachusetts Medical College. It was formerly the annual custom, both in this country and in Europe, when the lecture on ether and gases was delivered by professors in many of the colleges, to put a little ether into a bladder and offer the students their choice to inhale ether or nitrous oxide. This offer was accompanied with a statement that the nitrous oxide, when carried to the same extent, was safe, and the other dangerous. During Dr. Morton's attendance upon the lectures of the Medical College, nitrous oxide and ether were both lectured upon, and the effect of nitrous oxide exhibited before the class, he taking part in the exhibitions. Instances are on record of students falling flat upon the floor during insensibility, produced by the inhalation of ether at these exhibitions. Mr. Metcalf, to whose testimony we shall presently refer, communicated to Dr. Morton an account of his administering ether to a person, for the purpose of producing exhilaration, who became exceedingly wild, and in his struggles severely injured his head, and yet who, after the subsidence of the wild state, knew nothing of his injury until his attention was called to it. These facts, taken in connexion with the observation Dr. Morton had made of the effects of ether sealed up in his patient's tooth, was calculated to arrest attention. They presented credentials which had a right to be examined. Ether had a right to be tried, candidly and fairly tested, unless it could be shown that its previous bad character forfeited all claim to further consideration. What, then, was its previous character? What is the *a priori* evidence respecting the danger of ether on the one hand, or its narcotic power on the other? And first, the danger rests mainly upon the evidence of a few cases; the gentleman in Brande's Journal, the druggist's maid servant, and the young man of the Midland Medical and Surgical Journal; to which may be added the experiments of Orfila upon dogs, and Brodie upon Guinea pigs.

He therefore engaged earnestly and diligently in the study of its properties, more especially the effect produced by its inhalation. The current knowledge on the subject was not in all things encouraging. It had, doubtless, many times had the effect of producing total insensibility, from which the subjects recovered without injury, but in some cases it had caused death; caution was therefore necessary in its use, and success uncertain. The student in pursuit of scientific discovery leaves but few traces until he reaches the point where success is no

longer doubtful; the fear of ridicule in case of failure, and the fear of rivals in case of success, are sufficient to make him cautious even to timidity. One sagacious observer, however, discovered Dr. Morton's purpose before he disclosed it to his more intimate friends. This witness is the son of the present Judge Metcalf, of the supreme court of Massachusetts, and of the highest character, and of responsible scientific attainments; he supplied all the chemicals for the city institutions of Boston and Chelsea. On the 6th day of July, 1846, Mr. Metcalf sailed for Europe, in the ship Joshua Bates, on a tour, from which he returned in the fall of 1847. The story is best told by himself.

9th. Did you ever have any conversation with Dr. William T. G. Morton on the subject of the properties and effects of ether? If yea, when was it? State particularly all your means of knowledge as to the date, and especially as to its being before or after you heard of the ether discovery, and before or after your visit to Europe.

Answer. I did have a conversation with him on that subject. It was previous to my departure for Europe; it was the spring or early summer of 1846. I know it was previous to my departure for Europe, because, when I saw this account in the French journal, I fixed it in my own mind that Dr. Morton was the man, remembering this conversation; and I think I mentioned it to persons who were with me.

* * * * *

11th. Where was this conversation with Dr. Morton? State the circumstances fully, and all that was said or done on either side.

Answer. It was in my store in Tremont street, then occupied by Mr. Burnett. Dr. Morton came in, and had a vial filled with sulphuric ether. While he had it in his hands, he came to me and asked various questions with regard to its qualities and medicinal effects. He asked with regard to its effects when inhaled. I spoke of it as producing the same effects as nitrous oxide gas when inhaled; and I related to him some experiments of mine in taking and giving it for purposes of exhilaration. I stated to him also what was the then general belief, that if inhaled in excessive quantities its effects would be dangerous, if not fatal.

12th. State all you saw or did with reference to this vial. Describe it. How large was it? What did you do to it? How do you know it was sulphuric ether? Why may it not have been chloric ether, or nitrous oxide?

Answer. Dr. Morton brought it in the vial which he had filled. The vial had on an old and dirty label, on which was printed sulphuric ether. The label was not put on at the time. I recollect perfectly well having the vial in my hands, and uncorking it and smelling it. It was a two or four-ounce vial, as large as that. I know it was sulphuric ether, and not chloric ether or nitrous oxide.

* * * * *

20th. State anything which Dr. Morton said, or asked, tending to show his knowledge or ignorance of sulphuric ether, and the extent thereof.

Answer. I can't remember any particular thing, but he knew something about it, as was manifest from his questions. The questions he asked showed some knowledge on the subject. When he went away he knew as much about it as I did, for I gave him all the information which I had.

* * * * *

3d. Did any fact by you communicated to Dr. Morton, or any statement made, relate to the prevention of pain by sulphuric ether in surgical operations of any kind?

Answer. Nothing from me of that kind. I mentioned to him an account of a person who had injured himself while under the influence of ether, and did not know that he had been hurt.

* * * * *

6th. What was the account referred to by you of a man who did not know of his being hurt?

Answer. In giving a general account of my administering ether, I spoke of a person to whom I had given it, who was exceedingly wild, and who injured his head while under the influence of it, and did not know, when he got over the influence of the ether, that he had hurt himself until it was called to his attention. This was not a new fact, but was well known at the time.

7th. You have spoken of stories and anecdotes which you told to Dr. Morton. Were any of those matters from your own experience? If aye, what?

Answer. They were all within my own experience, so far as I now recollect. One of the incidents is the one I have just related. Another was the case of a man with whom I sat up all night while under the influence of ether, and a good many ludicrous things occurred, which I related to the Doctor.

8th. Whether or not you told Dr. Morton of the effect which the ether had on those persons to whom it had been given by you? And if so, what did you state was the effect of the ether?

Answer. The two preceeding answers will answer this. I stated that its general effect was exhilaration, and incidentally I mentioned this case of insensibility.

* * * * *

Answer. There are many kinds of ether, or several kinds and qualities, varying in name. He said nothing to me about the ether in his hands not serving his purpose. The information was all on my side, though he showed by his questions that he knew something of its nature.

10th. Whether or not the questions referred to by you in your answer to the 20th interrogatory, were or were not such as any one familiar with Dr. Wells and his experiments, and interested in the same, would or might have asked for?

Answer. At the time those questions were asked I did not know that there was anything then in them more than any person interested in the subject might have asked, but subsequent events, connected with my recollection of his manner, have given me the impression that he was then seeking for this object which has been attained—the anæsthetic effect.

If we consider the then pursuit of Dr. Morton, his earnest desire for information, and his anxiety to preserve his secret, his shyness with others, and his comparative freedom in conversation with Mr. Metcalf, will be fully explained. Mr. Metcalf was a chemist possessed of all the current scientific knowledge of his profession, and he was just setting out on a voyage to Europe, so that Dr. Morton could avail himself of his knowledge and his suggestions with safety to his secret.

Joseph M. Wightman, present mayor of the city of Boston, a gentleman who has been in the habit of giving experimental lectures on science, since 1837, and on all the various branches of natural philosophy, states in his deposition as follows:

9th. When Dr. Morton asked you if the India-rubber bags would hold ether, did he mention what kind of ether he was inquiring about? What was it? Are you sure? and why?

Answer. I asked him, when he asked me the question, "if it was sulphuric ether." He said it was. I am sure, because of the subsequent conversation with him of the effect of the ether in softening the bags. I knew of no other kind of ether which would have that effect. When he asked me about the effect of ether upon the bags, my first question to him was, "I suppose you mean sulphuric ether," and he replied "that he meant the common ether." I think these were his words.

Answer. The conversation in relation to the subject was more extended in relation to the effects of mesmerism and ether at that time, than I have indi-

cated in my previous answers—not only the subject of mesmerism and that of exhilarating gas, but also the effects of inhalation of ether was spoken of. I now recollect of speaking to Dr. Morton about the effects of breathing ether from a handkerchief, as referred to in my answer to twenty-first interrogatory, at the time of the conversation with him about the India-rubber bags; I think it was also at this interview that the impression was made upon my mind that Dr. Morton was seeking for some method to draw teeth without pain.

Ere this, his intimate friends and the young men in his office knew he was engaged in devising or perfecting some important improvement in dentistry.

Boston, *March 25, 1847.*

I, Francis Whitman, of Boston, in the county of Suffolk, and State of Massachusetts, student at dentistry, on oath depose and say :

That I have often heard Dr. Morton speak about discovering some means of extracting teeth without pain. This discovery appeared to be the subject of his thoughts and investigations during the greater part of last year, i. e., 1846. One day, I think it was previous to July, 1846, Dr. M., in speaking of the improvements he had made in his profession, and of some one improvement in particular, said if he could only extract teeth without pain, he “would make a stir.” I replied that I hardly thought it could be done. He said he believed it could, and that he would find out something yet to accomplish his purpose. In a conversation with Dr. M., some time in July, he spoke of having his patients come in at one door, having all their teeth extracted without pain and without knowing it, and then going into the next room and having a full set put in.

I recollect Dr. Morton came into the office one day in great glee, and exclaimed that he had “found it,” and that he could extract teeth without pain! I don’t recollect what followed; but soon after he wanted one of us in the office to try it, and he then sent William and Thomas out to hire a man to come in and have an experiment tried upon him.

I told Dr. Morton I knew what it was that William had bought, and said it was chloric ether. Dr. M. then said he wished to know if ether would dissolve India-rubber, and sent William P. Leavitt to inquire of Dr. Gay if it would.

About this time Dr. M. asked me to get the books on chemistry and find what they said about ether. I did so, and read it over to him, and I think he went to Burnett’s to see if he could not find something there.

Extracts from the testimony of Dr. William P. Levitt, of Boston.

Answer. I commenced studying dentistry with Dr. Morton in March, 1846, I believe, and was there nearly three years.

8th. What did you first know Dr. Morton to say or do about ether? State all you recollect, in its order, with all the circumstances.

Answer. The first which I heard of ether was immediately after my return from the country. It was the first of July, 1846. The first I heard, I believe, was when I was sent after some to Brewer, Stevens & Cushing. I heard Dr. Morton ask Dr. Hayden where he could procure some pure ether; this was in the back office. Hayden told him that he could get it, probably, at Brewer, Stevens & Cushing’s, on Washington street. He then spoke to me, and asked me to go down, take a demijohn and get it filled, and be careful and not let them know who it was for. I went down and bought the ether, and, to make sure, I told him to make the bill out for the ether in the name of some man in the country. I forget what name I gave him. He did do it, and gave it to me, and I returned to Dr. Morton; I gave the ether to him. Soon after that he sent me to Dr. Gay’s to ask him if ether would dissolve India-rubber; I went, and did not find the place, and returned.

10th. What was the next you saw or knew Dr. Morton to do about ether?

Answer. The next I heard of it he sent me and Thomas R. Spear to find a

man to have a tooth extracted under the influence of the ether. He told me he would give me five dollars if I would find a man to take the ether and have a tooth extracted. I went out with Thomas R. Spear for that purpose, but I did not find one; I went down on the wharves, City wharf, and Faneuil Hall market. He wanted a big Irishman, he said, a full, robust man, to whom he could give a good quantity. I returned, and reported so to Dr. Morton. Before this he had tried to induce me to inhale the ether. He asked me to take it, and said it was perfectly harmless; that he had taken it himself. I declined doing it. He tried to hire Spear to take it in my presence. Dr. Morton offered him some money; it was five or eight dollars. Spear said he would take it at the time, I believe, but afterwards concluded not to.

44th. I wish you to describe the proceedings of yours and Spear's in taking ether on this evening you have spoken of.

Answer. I had charge of the front room, and Spear, I think, had charge of the back room. I most generally took care of my room in the evening after folks had gone out and Spear was present. He got hold of the demijohn in some way or other, and said, "I'll take some ether, will you?" He took out his handkerchief sat down in the chair, took down the demijohn, and turned some on. He sat back in the chair, and held the handkerchief up to his face, and began to inhale it. He appeared to fall nearly asleep; he would quite, I think, if he kept still, if it had not excited him so. I think I told him if he would inhale it through his mouth it would affect him much quicker and much pleasanter; that it would not excite him so much as it would to draw it through his nostrils. I sat down in the chair, and took the cup which I mentioned with the sponge in it. I told Spear that I would take it if he would leave the room, as I was afraid he would cut up some capers (he was so lively) if I got asleep. I shut myself into the room, sat back in the chair, and began to inhale it.

45th. Did Spear, when he inhaled the ether on an evening, when, as you say, you and he inhaled it, move from the chair in which he was seated?

Answer. He did not move while he was inhaling it, not until he dropped the handkerchief; then he jumped up, and was very much excited; he jumped round considerably; I did not hold him. It was a minute after he put the handkerchief to his nose before these effects showed themselves.

On the 30th of June, 1846, three months before the discovery was made public, it appears, by the statement of Richard H. Dana, jr., attorney at law, and by a charge in his books, that an article of agreement was entered into by Doctor Morton and G. G. Hayden, by which the latter agreed to take charge of the business of Doctor Morton for a time; Doctor Morton giving to Mr. Dana as a reason of his entering into the arrangement, that he wished to give his attention to another matter of great importance, which, if successful, would revolutionize the practice of dentistry.

This conversation was shortly after detailed by Richard H. Dana, jr., to Doctor Francis Dana, jr., whose corroborative evidence puts the substance of the conversation beyond question, and the date is fixed by that of the instrument and the entry above referred to.

Grenville G. Hayden testifies "that, about the last of June, 1846, Doctor William T. G. Morton called upon me at my office, No. 23 Tremont Row, and stated to me that he wished to make some arrangements with me that would relieve him from all care as to the superintendence of those employed by him in making teeth, and all other matters in his office. He stated, as a reason for urging me to superintend his affairs in his office, that he had an idea in his head, connected with dentistry, which he thought 'would be one of the greatest things ever known,' and that he wished to perfect it, and give his whole time and attention to its development. Being extremely urgent in the matter, I made an engagement with him the same day, according to his request. I then asked him what his 'secret' was. 'Oh,' said he, 'you will know in a short time.' I

still insisted upon knowing it, and he finally told me the same night, to wit, the night of the last day of June, 1846, aforesaid, that 'it was something he had discovered which would enable him to extract teeth without pain.' I then asked him if it was not what Doctor Wells, his former partner, had used, and he replied, 'No! nothing like it;' and, furthermore, 'that it was something that neither he nor any one else had ever used.' He then told me he had already tried it upon a dog, and described its effects upon him, which (from his description) exactly correspond with the effects of ether upon persons who have subjected themselves to its influence, under my observation. All this happened in June, 1846. He then requested me not to mention what he had communicated to me.

"About a month after this, or the first of August, 1846, Doctor Morton asked me where he could get some pure ether, and asked me to go to Joseph Burnett's apothecary shop, and purchase a four-ounce vial full of ether, which he said he wished to carry home with him, he being about to leave town for Needham, where he then resided. And about the same time he explained to me the nature and effects of ether, and told me that if he could get any patient to inhale a certain quantity of ether gas, it would cause insensibility to the pain of extracting teeth, and he tried to induce me to take it. Doctor Morton said he had breathed it himself, and it would do no harm; and he at the same time tried to induce three young men in the office to take the gas. This was in August, 1846. He was continually talking about his discovery to me. From the time I engaged with Doctor Morton, as aforesaid, he frequently stated to me that he had nearly perfected every department in dentistry, save extracting teeth without pain, and that he was determined to accomplish that also. But towards the last of September following, he intimated to me that, in some particulars, his discovery did not work exactly right, and, in my presence, was consulting his books to ascertain something further about ether."

Doctor A. A. Gould, a member of the American Academy of Arts and Sciences, the American Philosophical Society, the Academy of Natural Sciences of Philadelphia, the Boston Society of Natural History, and the Imperial Mineralogical Society of St. Petersburg, in his deposition testifies as follows:

Cross-interrogatories by A. Jackson, jr., esq., counsel for Doctor Charles T. Jackson.

"11th. Will you please state when, and under what circumstances, you first had any knowledge of Doctor Morton?"

"Answer. I had heard Doctor Jackson speak of him as a student; but my first personal knowledge of him was in August or September, 1846, when he called to request permission from me to place my name, as a reference, on his card.

"14th. Will you please state what he said about destroying pain?"

"Answer. As near as I can recollect, he said, "and I will have some way yet by which I will perform my operations without pain." I smiled, and told him if he could effect that, he would do more than human wisdom had yet done, or than I expected it would ever do."

From this testimony, corroborative of the statement of Dr. Morton, it does, in the opinion of your committee, sufficiently appear that he was, prior and subsequent to the 30th June, 1846, intent upon the discovery of some anæsthetic agent which would enable him to extract teeth without pain, and that he had faith and confidence that he was on the point of making the discovery. He says in his narrative that the anæsthetic agent which he then had in view was sulphuric ether, and the proof adduced is, in the opinion of your committee, equally conclusive in support of that fact.

In the early part of August he communicated to Dr. Hayden the material used, and the course of his experiments had exhausted his supply of ether. He requested Dr. Hayden, during the early part of August, to procure him a fresh

quantity from the store of Mr. Joseph Burnett, and proposed that he should inhale it, stating at the same time that he had already used it several times; but the proposed inhalation Dr. Hayden respectfully declined.

This last supply procured was taken to the country. As, one day, he was giving it to his former patient, (the spaniel,) the animal, intoxicated, sprang against the jar, breaking the glass, and spilling all its contents but a small quantity. Morton, soaking his handkerchief in the portion which remained, applied it to his own mouth and nostrils, and by deep inspirations inhaled the vapor. Soon a feeling of lassitude came over him, followed by a complete but very momentary state of unconsciousness, as he states: "I am firmly convinced that at that time a tooth could have been drawn with no feeling of pain or consciousness." This was the first real verification of the theory on man—but on himself. Now it remained to corroborate it upon others.

This promised fair, but he was not yet satisfied. Before attempting its use in public, he tried another and more decisive experiment on himself, which he thus describes in his memoir to the Academy of Arts and Sciences, at Paris, and which was presented by M. Arago:

"Taking the tube and flask, I shut myself up in my room, seated myself in the operating chair, and commenced inhaling. I found the ether so strong that it partially suffocated me, but produced no decided effect. I then saturated my handkerchief and inhaled it from that. I looked at my watch, and soon lost consciousness. As I recovered I felt a numbness in my limbs, with a sensation like nightmare, and would have given the world for some one to come and arouse me. I thought for a moment I should die in that state, and the world would only pity or ridicule my folly. At length I felt a slight tingling of the blood in the end of my third finger, and made an effort to touch it with my thumb, but without success. At a second effort I touched it, but there seemed to be no sensation. I gradually raised my arm and pinched my thigh, but I could see that sensation was imperfect. I attempted to rise from my chair, but fell back. Gradually I regained power over my limbs and full consciousness. I immediately looked at my watch, and found that I had been insensible between seven and eight minutes.

"Delighted with the success of this experiment, I immediately announced the result to the persons employed in my establishment, and waited impatiently for some one upon whom I could make a fuller trial. Toward evening a man, residing in Boston, came in, suffering great pain, and wishing to have a tooth extracted. He was afraid of the operation, and asked if he could be mesmerized. I told him I had something better, and saturating my handkerchief, gave it to him to inhale. He became unconscious almost immediately. It was dark, and Dr. Hayden held the lamp, while I extracted a firmly-rooted bicuspid tooth. There was not much alteration in the pulse, and no relaxation of the muscles. He recovered in a minute, and knew nothing of what had been done to him. He remained for some time talking about the experiment. This was on the 30th of September, 1846. This I consider to be the first demonstration of this new fact in science."

The former report thus alludes to that experiment:

The special circumstances attendant on this first actual experiment were most fortunate for Dr. Morton, for the cause of surgical science, and for the human race. The patient, owing to his intense suffering, was glad to avail himself of anything, real or imaginary, to relieve the pain which he felt and to mitigate that which he feared. He therefore inhaled the vapor freely, and, delighted with the soothing lenitive, he continued to inhale it eagerly until, anæsthesia being complete, he had forgotten his past sufferings and was beyond the reach of present pain. He was a man of vigorous constitution; he immediately rallied, unconscious of the operation which had been performed and wholly relieved from the pain which so lately afflicted him. If, in his stead, the boy who sick-

ened with the inhalation, and whose parents, believing him poisoned, threatened a prosecution, had been the first subject, the experiments would probably have gone no further; Doctor Morton would have been overwhelmed with censure and ridicule, and we do not think that either of the contestants would have come in to assert his claim to the disgrace of the failure. Considering the result, it is not a matter of surprise that Doctor Morton was elate with his success. He immediately announced it to those about him, though he concealed from them all, except Hayden, the agent with which anesthesia had been effected. He immediately obtained the certificate of Eben Frost, the subject of his experiment, and consulted with Doctor Hayden about testing his pain-subduing vapor in hospital practice.

Doctor Henry I. Bigelow, professor of surgery in the Massachusetts Medical College, a member of the American Academy of Arts and Science, the Boston Society for Medical Improvement, an honorary member of the Anatomical Society of Paris, corresponding member of the Biological Society of Paris, in his work on ether and chloroform, thus alludes to the condition of the discovery at this period:

"Towards nine o'clock the inmates of the establishment were aroused by the arrival of a patient. Yet he, recognizing in the dental art only the substitution of one pain for another, despairingly inquired if mesmerism was not available in such ordeals. Here, then, was the long-wished-for opportunity, and complete unconsciousness crowned the experiment with success. It is quite probable that the world will not remember who this individual was, and yet it is true that the whole discovery of which we are now speaking exhibited its first authentic effort when it annulled the pain accompanying the lesion of the little nerve that animated his defective molar.

"It is worth while here to ask, what was the position of the discovery at this time? A tooth had been painlessly drawn, and, at a previous time, an irritation of the pulmonary air-tubes had been alleviated, with alleged insensibility, by the inhalation of a subtle vapor. Here were two facts, insufficient for the most hasty generalization, circumscribed in their bearing and showing, not that every person could be affected in a similar manner, bearing not upon vitality at large, but upon two specimens of it, as modified in these two individuals; and proving, at the most, that animal vitality could be thus affected in two instances; and not that it could be so in all instances. Besides this, the wholly different question of danger was not yet touched by evidence. If these two cases showed that insensibility could be thus affected without danger, two or three previous cases showed, with equal clearness, that insensibility produced death. Knowledge, at this point, rested upon a few hypothetical facts. I confess had I been then asked what inference I considered safe, I should have replied, 'you have succeeded in two instances only; and, in view of the previous evidence upon this subject, it is quite likely that in two more instances either you will fail to produce insensibility, or, having produced it, your patients will die.' This seems to me the necessary logical conclusion upon previous evidence; and that this was the first conclusion of those who had knowledge in such matters will be well remembered by many. I cite only the opinion of a distinguished chemist in a neighboring city, who, after one or two facts of insensibility, counselled his son not to risk his health upon it. Also a letter from Sir Benjamin Brodie, one of the distinguished experimenters in physiology of twenty years ago, who, in full view of all the facts that were borne across the Atlantic, at the first announcement of the discovery, and after reflection, still wrote to Doctor Chambers: 'I had heard of this before. The narcotic properties of inhaled ether have been long known, and I have tried it on Guinea pigs, whom it first set asleep and then killed. One question is, whether it can be used with safety.'

"This was indeed the one great question now to be decided. Another question was, can insensibility be produced in all cases? Let these questions be an-

swered affirmatively, and the surgeon would be justified in multiplying experiments, while the value of the discovery would be infinitely enhanced.

"To settle these important questions, many instances of insensibility were needed, which were not long in offering themselves to the tenant of a largely frequented dental establishment. Each new trial added evidence in geometrical proportion, while the absence of serious mishap encouraged hope.

"Here is a second point in the discovery, and I consider a second proposition to have been now pretty well demonstrated. This was, not that ether *might* produce insensibility during the extraction of a tooth, and that the state of somnolence might be unattended with danger, but that it could always produce insensibility, and that the danger was comparatively slight.

"Brief inhalation may be considered as fairly tested, and the discovery fairly demonstrated, in this rapid and multiplied experience.

"Analogy, the degree of insensibility, and its superficial extent, rendered it quite probable that such insensibility would prove complete and universal. An *experimentum crucis* could alone determine such a point; nor was it long delayed."

This public experiment, and the circumstances attending, are proved to the entire satisfaction of your committee. Dr. Morton goes on to say:

"Afterwards I made several additional experiments in my office, with various success. I administered it to a boy, but it produced no other effect than sickness, with vomiting, and the boy was taken home in a coach and pronounced, by a physician, to be poisoned. His friends were excited and threatened proceedings against me. A notice of my successful experiment having, without my knowledge, got into the papers, several persons called, wishing to have it administered. I gave it to a lady, but it produced no other effect than drowsiness; and when breathed through the apparatus it produced suffocation. I was obliged to abandon this mode and try the globe, and procured one from Mr. Wightman. Placing a saturated sponge in the larger end she breathed through that. In this way she seemed to be in an unnatural state, but continued talking, and refused to have the tooth extracted. I made her some trifling offer, to which she assented, and I drew the tooth, without any indication of pain on her part, not a muscle moving. Her pulse was at 90, her face much flushed, and after coming to she remained a long time excessively drowsy. From this experiment I became satisfied of what is now well proved, that consciousness will sometimes remain after insensibility to pain is removed.

"I afterwards gave it to a Miss L., a lady of about twenty-five. The effect upon her was rather alarming. She sprang up from the chair, leaped into the air, screamed, and was held down with difficulty. When she came to she was unconscious of what had passed, but was willing to have it administered again, which I did with perfect success, extracting two molar teeth. After this I tried several other experiments, some with more and some with less success, giving my principal attention to the perfecting of my modes of administering it."

The public notice which had been drawn to these trials by the publication in the newspapers induced many to visit his office as patients, and from motives of curiosity or interest; among them Dr. Henry J. Bigelow, the eminent surgeon, from whose notes the following cases were taken, and are good examples of the usual results produced by the inhalation of ether, and of the feelings and expressions of patients under its influence.

"A boy of sixteen, of medium stature and strength, was seated in the chair. The first few inhalations occasioned a quick cough, which afterwards subsided; at the end of eight minutes the head fell back and the arms dropped, but, owing to some resistance in opening the mouth, the tooth could not be reached before he awoke. He again inhaled for two minutes, and slept three minutes, during which time the tooth, an inferior molar, was extracted. At the moment of extraction the features assumed an expression of pain, and the hand was

raised. Upon coming to himself, he said he had had a 'first-rate dream—very quiet,' he said, 'and had dreamed of Napoleon—had not the slightest consciousness of pain—the time had seemed long;' and he left the chair, feeling no uneasiness of any kind, and evidently in a high state of admiration.

"A girl of sixteen immediately occupied the chair. After coughing a little she inhaled during three minutes, and fell asleep, when a molar tooth was extracted, after which she continued to slumber tranquilly during three minutes more. At the moment when force was applied she flinched and frowned, raising her hand to her mouth, but said she had been dreaming a pleasant dream, and knew nothing of the operation.

"A stout boy of twelve, at the first inspiration, coughed considerably, and required a good deal of encouragement to induce him to go on. At the end of three minutes from the first fair inhalation the muscles were relaxed and the pupil dilated. During the attempt to force open the mouth he recovered his consciousness, and again inhaled during two minutes; and in the ensuing one minute two teeth were extracted, the patient seeming somewhat conscious, but upon actually awaking he declared 'it was the best fun he ever saw,' avowed his intention of coming there again, and insisted upon having another tooth extracted upon the spot.

"The next patient was a healthy-looking, middle-aged woman, who inhaled the vapor for four minutes. In the course of the next two minutes a back tooth was extracted, and the patient continued smiling in her sleep for three minutes more. Pulse 120, not affected at the moment of the operation, but smaller during sleep. Upon coming to herself she exclaimed that 'it was beautiful—she dreamed of being at home—it seemed as if she had been gone a month.'"

These cases, which occurred successively in about an hour, at the room of Dr. Morton, are fair examples of the average results produced by the inhalation of the vapor, and will convey an idea of the feelings and expressions of many of the patients subjected to the process.

The gentleman who had conducted these experiments determined upon submitting the new phenomena to the test of a surgical operation; and there was a certain liberality of mind which was instrumental in introducing the discovery into the Massachusetts General Hospital. Many such pretended discoveries had failed. To be a party to such public failure was to invite an imputation of lack of judgment; and although this novelty presented peculiar and unequivocal evidence, and possessed an intrinsic worth which need have regarded no opposition, yet a spirit of liberality and of discernment is to be recognized in the attitude of Dr. Warren, who assumed the responsibility of failure, and of the danger that might well seem possible to one who had not witnessed the previous experiments. Ether has not always met with equal consideration.

Dr. Hayden says on the evening of the 30th of September, after the first experiment had been made with success, Dr. Morton spoke about going to the hospital and using the ether there, and thus bring out the new discovery.

Dr. John C. Warren was then senior surgeon and in charge of that hospital. On the 4th of October Dr. Morton called upon him and laid the whole matter before him. There were other reasons why it was most natural that Dr. Morton should go to Dr. Warren; he was a member of his class, and he had on former occasions been in the habit of calling on him for the purpose of showing improvements he had made, somewhat out of the line of the dentist, and lying within the domain of surgery. J. Mason Warren says:

"I first saw Dr. Morton in 1846, at the house of Dr. Warren, in Park street, I think, between 1 and 2 o'clock. He came there to show me an artificial palate, I being at that time interested in operations for fissure of the palate. Some time afterwards he came there again, about the same hour, to exhibit to Dr. John C. Warren and myself some artificial teeth, which, he said, were constructed on a new plan. Some time after that, in October, Dr. Warren in

formed me that Dr. Morton had been there and informed him that he had discovered an agent for preventing pain, I think he said, in dental or surgical operations, and requested Dr. Warren that he would afford him an opportunity of trying it in a surgical operation. Dr. Warren, after some questions on the subject, promised that he would do so. On Tuesday, which I think was the 13th of October, and after the surgical visit at the hospital, a patient was brought up into the operating room for the purpose of having an operation performed. Dr. Warren then, apparently remembering his promise to Dr. Morton, said: 'I now remember that I have made a promise to Dr. Morton to give him an opportunity to try a new remedy for preventing pain in surgical operations,' and asked the patient if he should like to have the operation done without suffering. He answered that he should. The operation was therefore deferred until Friday, the 16th of October."

M. Velpeau, who is named at the head of the commission on ether, in speaking of Dr. Morton, at the period he applied to Dr. Warren, says:

"Sure, then, of this fact, he addressed himself to the surgeons of the Massachusetts General Hospital, and proposed to them to apply his means to patients who were to be submitted to the action of cutting instruments. They hesitate a moment; they afterwards accept. Without being complete the first experiment gave courage; at the second attempt success left nothing to desire. The facts multiply themselves in a few days, and the question is answered almost as soon as put. No objection is longer possible; the most incredulous are obliged to yield to the evidence; they must believe their eyes; the solution of the grand problem is at last found."

Day after day rolled on without hearing anything from Dr. Warren. In the meantime Dr. Morton was constantly engaged in trying experiments at his office, some with more and some with less success. Dr. Bigelow gives an account of half a dozen experiments witnessed in the course of one hour at Dr. Morton's rooms. From the day of the first experiment, it is safe to say that Dr. Morton hardly knew a full night's rest or a regular meal for three months.

The enthusiasm, as regards the new discovery, increased from day to day; notices multiplied in the papers, and the news was spread—it was received with acclamation by men of science and high social position, while, at the same time, it inspired the poor waiting sufferers at the hospitals and elsewhere with confidence, hope, and joy. At first they seemed somewhat incredulous, as if it were "too good news to be true." Soon all became satisfied of there being something in it, on good hearsay evidence, and some had ocular demonstration of what they sought to know.

At the end of ten long days from the time Dr. Morton called on Dr. Warren he received the following note:

"DEAR SIR: I write at the request of Dr. J. C. Warren, to invite you to be present on Friday morning at ten o'clock, at the hospital, to administer to a patient, who is then to be operated upon, the preparation which you have invented to diminish the sensibility to pain.

"Yours, respectfully,

"C. F. HAYWOOD,

"House Surgeon to the General Hospital, October 14, 1846.

"DR. MORTON, Tremont Row."

As the time drew near for his experiment at the hospital Dr. Morton became exceedingly anxious, and devoted himself, night and day, to the perfection of his apparatus, and to a still more complete investigation of the subject.

Among others whom he conferred with at this time was Dr. A. A. Gould, who gave it his earnest attention, and devoted himself to making sketches of apparatus, and in experimenting and suggesting antidotes for its unfavorable

effects; and in still further extending to Morton the knowledge of the literature of the subject. One form of apparatus, which had been agreed upon by him as possessing advantages over the old one used by Morton, had been ordered of Mr. Chamberlain, the instrument maker, who had promised to have it finished early on the morning of the trial at the hospital. But, as the hour drew near, it was found that some last changes were required to finish it, and Morton, becoming nervous and impatient, hurried him on in his work, until at last, fearing lest he should be too late, he seized the instrument directly from his hands, and started in haste for the hospital, almost breathless with apprehension and the celerity of his movements.

He had taken the precaution to request Mr. Frost to accompany him, to conduce in some way to his relief in case of failure, and act as a voucher as regards his statements of what he had already accomplished. At this moment his mind was in one great whirl of doubts and conflicting emotions. Mixed with the fear that his new and untried instrument might not work, and perhaps render the issue abortive, was his own vague doubt of a successful exhibition.

He had already had sufficient experience in administering the vapor to know that its effects were widely different upon various persons, and he could hardly dare to hope that the case would be as favorable as that of the man who was accompanying him. Suppose the patient should be affected as some had already been at his house, and should scream, or leap into the air, requiring force to keep him in his seat, would not the surgeons at once feel obliged to interfere, take the patient from his hands, and politely request him to retire? Then, too, there were cases on record of patients, debilitated by disease, dying before the eyes of the operating surgeon, and the question flashed through his mind: "If this experiment should result adversely, shall I not be charged with its fatal issue?"

A second unfavorable fact in the case was his entire ignorance as to what his patient might be; whether some hardened toper, saturated with strong drink, upon whom the preparation might produce no more effect than his ordinary daily "nipper," or some delicate and timid female, who would tremble and be overcome at the very thought of being experimented upon.

Luckily for Morton was it that he arrived at the precise moment at which he did, but we will let an eye-witness tell the rest of the story.

Dr. Gould, who was present at the first operation in the hospital, says: "Dr. Warren was about to commence the operation. He suddenly rose and turned to those present, and said he had forgotten that he had promised to allow Dr. Morton to give something which he thought would prevent pain, and he would wait. Previous to the operation, Dr. Warren, having waited ten or fifteen minutes, again turned to those present and said: 'As Dr. Morton has not arrived, I presume he is otherwise engaged;' apparently conveying the idea that Dr. Morton did not intend to appear. The remark of Dr. Warren brought out a great laugh. Dr. Warren then sat down to his patient. Just as he raised his knife, Dr. Morton appeared with an inhaler with valves, such as I had proposed. He administered the ether. All looked very incredulous, especially as the man became at first exhilarated. But suddenly the anæsthetic effect took place. This occasioned a start of surprise from all present. Dr. Morton coolly informed Dr. Warren that his patient was ready."

We give the substance of Dr. Gould's testimony, the order not being exactly preserved.

"As Dr. Warren, seizing the bunch of veins in his hand, made the first incision through the skin, the patient made no sound, nor moved one muscle of his body. As the operation progressed all eyes were riveted on this novel scene in eager expectancy and amazement. The silence of the tomb reigned in the large amphitheatre, and the form of each beholder was as still and immovable as the skeletons and mummies which hung in the cases behind them.

"At length the operation was finished, and the blood having been washed from his face the patient was gradually allowed to come from his anæsthetic state. When fully restored to consciousness, and able to answer questions, he gave the triumphant and gratifying intelligence, 'I have experienced no pain, but only a sensation like that of scraping the part with a blunt instrument.' This arose from the fact that, as the operation had taken rather longer than anticipated, Dr. Morton had several times removed the inhaling instrument from his mouth."

Dr. John C. Warren says :

Answer. I performed an operation, at the request of Dr. Morton, at that time, upon a patient who was under the influence of something, I don't know what. I did not know then, and don't know now. Dr. Morton called on me some days before that time, said he had an article the use of which would prevent pain in surgical operations, and asked me to use it the first opportunity I had. Two or three days after, not having any private operation, I employed it on a patient at the hospital.

3d. Was this, and how far, a successful operation as regards the insensibility of the patient ?

Answer. As relates to pain, it was perfectly successful. The patient did not complain of pain at that time, nor even state that he had experienced pain, but, during the latter part of the operation, he was sufficiently conscious to speak and move freely.

4th. Was it Dr. Morton's request that you should use it at the hospital, or that you would use it in a surgical case, irrespective of place ?

Answer. It was of a general nature, and, as I understood, referred particularly to my private patient, but not having any private patient to operate on at that moment I applied it to a patient in the hospital.

5th. What was the operation of October 16, 1846 ?

Answer. It was an operation on a tumor about three inches long, on the left side of the neck, a dangerous vascular tumor, deeply situated. It was removed in about five minutes.

6th. Before you used it did you take means, by inquiry or otherwise, to satisfy yourself of the safety and probable utility of this substance which Dr. Morton proposed to administer ?

Answer. I asked Dr. Morton whether the substance he proposed to me to use was certainly safe to the patient, and whether he was sure it would be effectual, as I had been anxious to find something of the kind he proposed, and made repeated trial of articles without any satisfactory effect. He assured me in reply that the substance he proposed to employ was perfectly safe, and thought it would be effectual.

As this is the central point of the inquiry, your committee add a report, copied from the records of the Massachusetts General Hospital : "This case is remarkable in the annals of surgery. It was the first surgical operation performed under the influence of ether. Dr. Warren had been applied to by Dr. Morton, a dentist, with the request that he would try the inhalation of a fluid, which he said he had found to be effectual in preventing pain during operations on the teeth. Dr. Warren, having satisfied himself that the breathing of the fluid would be harmless, agreed to employ it when an opportunity presented. None occurring in private practice within a day or two, he determined to use it on this patient.

"Before the operation began, some time was lost in waiting for Dr. Morton, and ultimately it was thought he would not appear; at length he arrived and explained his detention, by informing Dr. Warren that he had been occupied in preparing his apparatus, which consisted of a tube connected with a glass globe. This apparatus he then proceeded to apply, and after four or five minutes the patient appeared to be asleep, and the operation was performed as above

described. To the surprise of Dr. Warren and the other gentlemen present, the patient did not shriek or cry out; but during the insulations of the veins he began to move his limbs and utter extraordinary expressions. These movements seemed to indicate the existence of pain, but after he had recovered his faculties, he said he had experienced none, but only a sensation like that of scraping the part with a blunt instrument, and he ever after continued to say he had not felt any pain. The result of this operation led to the repetition of the use of ether in other cases, and in a few days its success was established, and its use resorted to in every considerable operation in the city of Boston and its vicinity."

This was the 16th of October, 1846, made ever memorable and glorious as long as man shall suffer pain. The report of the Massachusetts General Hospital for 1848, says: "The student who from distant lands, or in distant ages, may visit this spot, will view it with increased interest as he remembers that here was first demonstrated one of the most glorious truths of science."

Dr. Henry J. Bigelow says:

"The operation of that day was incomplete in its results, for reasons to be hereafter indicated. A young man offered signs of sensibility during and after a dissection which was not particularly painful. Some powerful drug already known, or even the imagination, might well have been suspected of agency in the phenomena.

"On the ensuing day a woman offered herself with a tumor of considerable magnitude in the right shoulder. A few minutes of the most complete and passive insensibility served for its extirpation. No imagination was here to be accused. The drooping lid, the head fallen on the shoulder, the stolid relaxation of the mouth, suggested no overworking of the intellect, no rapt unconsciousness, nor inspired ecstasy. The phenomena were real, familiar to daily experience; they belonged to the profoundest sleep. This operation of Dr. Hayward first showed conclusively the power of the new agent in averting the terrors of the surgical art. The casual spectator would have remarked no expression of wonder nor unusual excitement in the bystanders at the working of this miracle. Nothing to awe or startle marred the tranquility of the operating room. Yet I think those present will not soon forget the conviction of those few moments, associate at this remote day with the breathless silence of the crowd, and the unwonted fumes of aromatics burned to mask the emanations from the yet mysterious agent. After this, to the surprise of Dr. Morton, the practice was discontinued, and for the ensuing three weeks the patients were all operated upon as before, though numerous operations were daily being performed at his own house.

Being desirous of employing it in a case of amputation, Morton applied to Dr. Hayward, then on duty, for an opportunity, as he had heard that there was then a patient requiring that operation waiting in the hospital.

Dr. Hayward says:

"On the first of November I took charge of the surgical department of the hospital; and on the following day, in conversation with Dr. Warren, I stated that I did not intend to allow the medical patients to inhale this preparation of Dr. Morton (for we were then ignorant of the precise nature of it) during my period of service, unless all the surgeons of the hospital were told what it was, and were *satisfied of the safety of using it*. Dr. Warren agreed with me as to the propriety of this course.

"On the 6th of November Dr. Morton called at my house and asked me if I was willing to have his preparation inhaled by a patient whose limb I was to amputate on the following day. I told him of the conversation I had had with Dr. Warren on the subject. Dr. Morton at once said he was ready to let us know what the article was, and to give the surgeons of the hospitals the right

to use it when they pleased. He added that he would send me a letter in the course of the day to this effect. I requested him to direct it to Dr. Warren, as he was the senior surgeon, and told him that I would submit it to my colleagues at a consultation to be held on the following morning. He wrote the letter accordingly."

"The subject was maturely considered, by the surgeons, who were unanimously of opinion that the ether should be inhaled by the individual who was to undergo the operation that day."

The letter was as follows :

"BOSTON, *November 6th*, 1846.

"DEAR SIR: As it may sometimes be desirable that surgical operations should be performed at the Massachusetts General Hospital under the influence of the preparation employed by me for producing temporary insensibility to pain, you will allow me, through you, to offer to the hospital the free use of it for all the hospital operations. I should be pleased to give to the surgeons of the hospital any information, in addition to what they now possess, which they may think desirable in order to employ it with confidence. I will also instruct such persons as they may select, connected with the hospital, in the mode of employing it. This information, I must request, should be regarded as confidential, as I wish for ample time to make such modifications as experience may suggest in its exhibition. It is also my intention to have persons suitable instructed, who will go wherever desired, for a reasonable compensation, and administer it for private operations, thus enabling any surgeon to employ it in his private practice whenever he may have occasion. I think you will agree with me that this will be wiser, until its merits are fuller established, than to put it into the hands of everybody, thereby bringing discredit upon the preparation by its injudicious employment. Should you wish me to administer at any of the operations to-morrow, I shall do so with pleasure; and should the above proposition be deemed worthy of being entertained, I shall be ready to make the arrangement as soon as informed of your wishes.

"W. T. G. MORTON.

"Dr. WARREN."

"PARK STREET, *November 6th*.

"DEAR SIR: I beg leave to acknowledge the reception of your polite letter; I shall lose no time in laying it before the surgeons of the hospital.

"I remain, respectfully, yours,

"J. C. WARREN."

Dr. Hayward, in speaking of this operation, says: "It was my fortune to perform the first capital operation on a patient rendered insensible by the inhalation of sulphuric ether. * * * *

It rarely falls to the lot of a professional man to be the witness of a scene of more intense interest. The operating room was crowded; many were obliged to stand. Besides the class of students in attendance on the lectures, numbering more than a hundred, and many of the principal physicians and surgeons of the city and neighborhood, there were present several clergymen, lawyers, and other individuals from the various callings of life. When I entered the theatre, before the patient was brought in, I found it, to my surprise, filled in every part, except the floor on which the table stood, with persons on whose countenances was depicted the almost painful anxiety with which they awaited the result of the experiment they were about to witness. I simply told them that I had decided with the advice of my colleagues, to allow the patient on whom I was to operate to inhale an article which was said to have the power of annulling pain. The patient was then brought in. She was a delicate looking girl of

about twenty years of age, who had suffered for a long time from a scrofulous disease of the knee joint. It had at length suppurated; there were extensive openings into the cavity of the joint; the cartilages were ulcerated, and partly absorbed; the bones carious, and symptoms of hectic fever had already made their appearance.

"As soon as she was well arranged on the table I told her that I should let her breathe something which I hoped would prevent her from suffering much from the operation, and that she need not be afraid of breathing it freely.

"As the ether was at the time administered by means of a large and clumsy instrument, which required, to some extent, the co-operation of the patient, it was desirable that the amputation should be done as rapidly as possible. Every thing, therefore, was arranged with this view. I decided to perform the flap operation. One person was to compress the artery, another to withdraw the flaps, a third to hand the instruments, and a fourth to watch the pulse. I grasped the patient's limb with my left hand, and held the amputating knife behind me in my right, carefully concealed from her view. The mouth piece of the inhaling instrument was then put into her mouth, and she was directed to take long inspirations. After breathing in this way a short time, the nostrils were compressed, so that all the air that went into the lungs must first pass through the machine, and of course be mixed with the vapor of the ether. She breathed with perfect ease, and without struggling, and in about three minutes from the time the instrument was put into her mouth Dr. Morton said, 'she is ready.' A deathlike silence reigned in the room; no one moved, or hardly breathed. I passed the knife directly through the limb, and brought it out as rapidly as I could, and made the upper flap. The patient gave no sign of feeling or consciousness, but looked like one in a deep, quiet sleep. Every other person in the room took a full inspiration that was distinctly audible, and seemed to feel that they could now breathe again. The second flap was then made, the bone sawed, five arteries were tied, and as I was tightening the ligature upon the sixth and last she groaned, being the first indication of sensibility that had been given. Nothing more was done than to bring the flaps together, cover the stump with cloths dipped in cold water, and apply two or three turns of a roller to keep them in place. Her consciousness soon returned; she was wholly ignorant that the operation had been done. For some time she would not believe it, and said that she had felt nothing till I tied the last artery. The operation lasted a minute and three-quarters, not including the time required to tie the arteries. I did it rapidly, though it has been done in less time, because I feared that the insensibility might pass off, and we had no means then, as we have now, of continuing it as long as is necessary."

Dr. J. Mason Warren says his father, on the day the preceding operation was performed, removed a portion of the jaw from a female, who was also rendered insensible by the ether, also administered by Dr. Morton. The next case was a patient of my own, November 12, in which the patient was entirely unconscious while under the influence of the anæsthetic agent given by Dr. Morton; this was a female at the west end of Boston, in the vicinity of Myrtle street. The operation was the removal of a tumor from the arm. I believe that was the first private operation performed with ether, so far as my knowledge goes. The next time was on the twenty-first of November, on a patient from whom I removed a large tumor of the thigh at the Bromfield House. The ether in this, as in the other cases, was given by Dr. Morton. From this time until March I had a series of surgical operations in private practice, in many of which Dr. Morton was present, and administered the ether.

Another important case that soon followed was that of a man at an advanced age, who was afflicted with a paralysis of the lower extremities, owing to a disease of the bones of the spine.

For the relief of this, and to prevent the extension of the disease in the bones,

it was decided necessary to cauterize him with the actual cautery the whole length of the back, on each side of the spine. How painful this would be, unless with the sensation benumbed, the slight burn of a finger can give some idea. He inhaled the ether, and soon was lying in a quiet and easy slumber. Then the surgeons taking the irons, heated to a white heat, passed them over his white and tender skin. As the hot iron hissed, and the flesh, blackened by the intensity, shrunk crisply away before it, without one groan or movement from the patient, the enthusiasm of those present knew no bounds, and had it not been for the stillness demanded in the place, and the exigency of the occasion they would so far have forgotten all propriety as to have broken out into tumultuous applause; nor was this subdued when the patient, on his return to consciousness, declared himself ignorant of the performance of the operation, and informed the bystanders that he had experienced a most delightful dream, and had experienced more agreeable sensations than he had felt for many a day.

Dr. Bigelow says: "A hundred promiscuous cases rapidly occurred; often in the face of hundreds of spectators, not one of whom attributed the results to deception or imagination. The mass of evidence swelled as it rolled onward, month after month, to every part of this country and of the civilized world; and yet in November, 1847, more than a year after the discovery, we find it stated that in one of the largest hospitals in North America ether 'had not been tried at all.'

"For the sake of humanity, if not of science, it is to be hoped that no hospital gates are barred against ether at this late day."

"The success of the discovery is very encouraging and its application extensive. It made its mark immediately, fixed and indelible, on the records of the medical faculty of the world. The report of the experiments in the medical hospital of Boston was received with delight in England and on the continent by the most enlightened members of the profession, and sulphuric ether and its kindred ethers were immediately adopted and took their place in medicinal practice as anæsthetic agents. They have been adopted in our army and navy, and no sum, though told by millions, would compensate for their loss or abandonment at this day. The value of the gift made by Dr. Morton to his country is indeed, incalculable. But in its results involved the ruin of his private fortune."

Augustus A. Gould, physician, Boston, being sworn, says:

"Invaluable. It would amount to an immense sum if each one who undergoes an operation would contribute what he would pay rather than dispense with it. I am unable to fix a money value upon it."

Henry J. Bigelow, physician and surgeon, Boston, being sworn, says:

"A million dollars a year as well as any other sum, because the revenue derived from those who should be compelled either to forego its use or to pay for it would be immense, incalculable."

Jacob Bigelow, physician and surgeon, Boston, being sworn, says:

"I conceive its value to be such that if it was only to be purchased with large sums of money, millions of dollars would readily and properly be paid by persons who are subjects of the pain it is competent to avert or relieve."

J. Mason Warren, physician and surgeon, Boston, being sworn, says:

"If you mean in money, I consider it at least one hundred thousand dollars. But its value is beyond all money; it is beyond computation. When I say one hundred thousand dollars, I mean that I think that is more likely the sum which perhaps might be given Dr. Morton as a recognition of his share in the discovery, just as Dr. Jenner received about such a sum for vaccination. I think it was shown that more than one was concerned in the discovery, each ought to have a hundred thousand dollars."

H. Q. Brigham, surgeon dentist, being sworn, says:

"Five hundred thousand dollars."

E. B. Warner, house physician to the northern dispensary in the city of New York:

"It is of immense value, and its worth is beyond comprehension in dollars and cents."

John H. Griscom, M. D., New York, being sworn, says:

"The pecuniary value of said discovery cannot be estimated, being beyond all calculation, as is that of human life and the relief of human suffering."

John Torrey, chief assayer at the United States assay office and consulting chemist:

"It is extremely difficult to estimate its value in money. I have said that Doctor Morton ought to have a monument of gold as high as Trinity church steeple, and I see no cause to alter my opinion."

Robert F. Weis, M. D., surgeon to the New York hospital, in the city of New York:

"Its value is incalculable."

Godfrey Aignes, M. D., house physician to the New York dispensary, New York, being sworn, says:

"The value cannot be expressed in money, but it is a great blessing to mankind."

Jonas P. Loines, house physician to the eastern dispensary in the city of New York, being sworn, says:

"The discovery of its use is, as anæsthesia, worth in the neighborhood of one million and a half dollars, so far as can be known, to this country."

Isaac Cummings, house physician to the Demilt dispensary, city of New York:

"The value of said discovery is one million dollars and upwards."

J. Henry Watts, house physician to the northwestern dispensary in the city of New York:

"The value of said discovery is incalculable, and has been a great blessing to mankind."

From the first, and for several years in private practice, and in many public institutions, it met with the most determined and persistent opposition. By some its efficiency was denied; by others it was declared to be a poison, which, if not fatal at once, led in the result to fatal consequences. On this point, Dr. Henry J. Bigelow says:

"Subsequently to the discovery of ether, and not a great while after—I mean the discovery of ether inhalation—there was a very great difference of opinion; first, as regards its safety. Many people maintained that it was dangerous. Some eminent surgeons have pertinaciously, and in the most surprising manner, adhered to this opinion to the present day, objecting to its use. At an early period certain religious grounds were urged against its adoption. Dr. Morton, as far as I know, uniformly and perseveringly urged it upon the medical profession and upon the world."

Dr. Gould says:

"34th. Was there, or not, and how long, any, and how great, effort made against the use of ether?"

"Ans. There was a strong prejudice against it in this city, and more especially elsewhere; the administration of it was denounced generally, and many articles were written against it in the medical and daily journals. I don't know any particulars further than writing articles and denunciations in private conversations."

"There was much indignation and disapprobation from the profession, especially the dentists, and also in several instances by patients. In one or two instances prosecution was threatened, not particularly on account of the mode of administration, but for administering it at all." The preconceived notions and settled theories of the physicians were sadly jostled. Not a few grew irritable and resented the interference. They closed their ears, shut their eyes, and folded their hands. They refused to touch or in any way pollute themselves with the unclean thing. They had quite made up their minds that pain was a necessary evil, and must be endured. They scouted the attempted innovation, and averred that no good could come of it.

Says Dr. Bigelow :

"It has been well said that the first attitude of the world towards a great discovery is incredulity, and then hostility ; and this was well exemplified in the reception of this announcement at the South. Three weeks elapsed before any notice of the subject appeared. Then came the doubts of those sagacious and experienced philosophers who were not easily to be deceived."

In January, 1847, a New York medical journal announced that "the last special wonder has already arrived at the natural term of its existence. It has descended to the bottom of that great abyss which has already engulfed so many of its predecessor novelties, but which continues, alas ! to gape until humbug yet more prime shall be thrown into it."

The New Orleans Medical Journal says, in the same month : "That the leading surgeons of Boston could be captivated by such an invention as this excites our amazement." "Why, *mesmerism*, which is repudiated by the *savans* of Boston, has done a thousand times greater wonders."

A leading medical periodical in Philadelphia says : "We should not consider it entitled to the least notice, but that we perceive, by a Boston journal, that prominent members of the profession have been caught in its meshes." It was "fully persuaded that the surgeons of Philadelphia would not be seduced from the high professional path of duty into the quagmire of quackery by the will-o'-the-wisp."

In November, 1847, more than a year after the discovery, it had not been tried at all in the Pennsylvania hospital, one of the largest in North America. The council of Zurich prohibited the use of ether. Congress withheld its agency when it might have assuaged the agony of the wounded soldier.

Even the Massachusetts General Hospital, within whose halls his inaugural experiments were made, and to which he had an especial right to look for support and encouragement, began to regard the discovery with distrust, and, with many other institutions of like character, temporarily barred its doors to the new agency.

Objections based on religious grounds were urged against the employment of ether. Pain, it was argued, was the natural and intended consequence of the primal sin, and therefore any attempt to do away with it must be wrong. These objectors failed to see that their argument, if it proved anything, proved too much, since it held with equal cogency against any remedial agency whatever, and, indeed, if carried into theology, would undermine its very central doctrine of redemption. Others opposed the anæsthetic on the ground that pain was salutary, and that its annihilation would be hazardous to the patient. And a eminent physiologist expressed the doubt whether there were a true advantage in suppressing pain. "It is a trivial matter," said this stoic, "to suffer, and discovery whose object is the prevention of pain is of slight interest."

In Paris the announcement of the discovery was received with all but indifference. Velpeau, Roux, Magendie, and others, politely declined using the discovery.

Letters came pouring in upon Dr. Morton from all over the civilized world, many of them upbraiding him with having announced the claims of a humbug. The Parisian academicians charged him with prematurely publishing his di-

covery. He received constant visits from professional gentlemen, who consumed his time with speculative doubts, questioning the accuracy of his experiments, and repeating the complaints of antagonists. Worse than this, it was alleged that the new agent might be used for infamous purposes. "A fatal habit," it was said, "had sprung up of using ether, like opium, for purposes of exhilaration, to all intents intoxication. A burglar forced his way into a mansion when all its occupants were wrapped in profound slumber, and, applying ether to them, he had the house all to himself." Frequent accidents, moreover, resulted from the use of impure ether by unskilful hands, so frequent, indeed, that prosecution was threatened for administering it at all. Meanwhile, all eyes were turned on Dr. Morton as the responsible person, and he felt that something must be done, some decisive step be taken, and at once, or the discovery would fall into disrepute and be abandoned. He stated in substance, in his memoir to the French academy, that the result of a thoughtful consultation was, that no better means could be devised to rigidly confine this new and powerful agency to professional hands, accustomed to the necessary precautions, than the procuring of a patent. This would prevent quacks and the public from tampering with danger, and, at the same time, he might give free permission to hospitals, charitable institutions, and duly qualified persons, to use the article without infringement. He never doubted that government would take the patent out of his hands as soon as the public good required it, making him such reimbursements as justice should require. At any rate, he was determined to stem the tide that was setting against the use of ether, and it was due to his family to secure his title against interference from ex post facto claimants who might arise. The patent was, under these circumstances, procured, and simultaneously with its exception, he gave, through the late John C. Warren, free permission to such hospitals and institutions as he chose to name, the free use of ether. The patent, however, remedied a few only of these evils; most of them continued in their full intensity long after it was procured.

From the first, and for many years, Dr. Morton made vigorous exertions to introduce his discovery to the public, and to promulgate information of the same and of its benefits, and the best modes of applying it. Believing that the diffusion of publications, setting forth its characteristics, and its best mode of action and effects upon the human system, and describing the apparatus then considered requisite to its successful administration, would be the most effectual means of bringing his discovery to the knowledge of the public, he, at great expense, caused large amounts of information to be printed and circulated, not only in all sections of the United States, but in Europe. The effect of these publications was to almost immediately attract general attention to the discovery, which was everywhere discussed and investigated, and Dr. Morton was stimulated to increased exertions in verifying and permanently establishing the novel and wonderful truths which he proclaimed. Some idea of his persevering labors may be formed from the following extracts from the testimony of Richard I. Dana, Esq., now United States district attorney for the district of Massachusetts, and Peleg W. Chandler, Esq., ex-city solicitor of Boston, a distinguished member of the Suffolk bar:

Richard H. Dana, counsellor-at-law, Boston, being sworn, says:

"I am familiar with it. I have known of unceasing efforts of Dr. Morton to bring forward the discovery and to vindicate his claims relative thereto. He has constantly been making such efforts; he has followed the matter up with wonderful energy, and has encountered difficulties which I think would have rushed almost any other man. I have always thought that a distinguishing merit in him has been that he had the courage, I may say the hardihood, to persevere in his experiments with sulphuric ether, in a manner which almost any other person would have feared to adopt, until he had demonstrated that it

might be used with entire safety, and would produce the effect of absolute insensibility."

Peleg W. Chandler, counsellor-at-law, Boston, being sworn, says:

"From what I have seen and heard in this community, I have no doubt that he has devoted himself mainly to the subject referred to, for many years with great industry, perseverance, zeal, and ability, and he seems to have labored under every discouragement."

"Whatever may have been the personal merits of his discovery, I do not believe it would have been in use to this day if he had not followed it up as he did."

"Doctor Morton met with embarrassments enough to dishearten most men. I have always felt that his remuneration for the vast benefit to the world conferred by his discovery has been totally inadequate. For one, I feel, and always have felt, grateful to him as one of the greatest benefactors of mankind of the present age."

As it was obvious that until the nature and mode of applying said discovery was more fully understood than was practicable upon the first introduction thereof, it might fail of success, by reason of ignorance or inexperience on the part of those attempting to employ it, Dr. Morton found it necessary to engage experienced assistants, instruct them in the application of his discovery, and send them forth over the country, to bring it to the notice of medical and surgical men. These parties he provided with the expensive inhaling apparatus then used, and with large quantities of high-priced ether, it being necessary that it should be chemically pure, in order to produce proper anæsthetic effects. The assistants themselves were generally young physicians, of professional education, good talents, and social position, calculated to personally inspire confidence where the discovery might be regarded with distrust. Many of them relinquished their private practice to thus aid in disseminating information respecting the discovery, and had to be well compensated, in addition to the payment of their heavy travelling expenses, and to the cost of the ether and the apparatus with which they were supplied, thus adding large expenditures to those otherwise incurred. One of Dr. Morton's assistants, a nephew of Dr. John C. Warren, on whose recommendation he was engaged, testified as follows concerning the expenditures of the introduction and the promulgation of the discovery:

Edward Warren, being sworn, says:

"From my actual knowledge, while engaged in behalf of the applicant, as before stated, and from information otherwise received, I state that from the time of said discovery, for the period of two years or upwards, Dr. Morton has spent nearly all his time, strength, and energy in the most constant and strenuous exertions to introduce said discovery to the public, and the result of all which was that the applicant's business was utterly destroyed, his health materially injured, and he was irrecoverably involved in debt. For the purpose of introducing said discovery he has employed many other persons, and procured to be composed and published many pamphlets and other documents, for all which he has paid large sums of money, as well as in travelling and hotel expenses, counsel fees, and for a great variety of other services performed by different persons in the same matter. *The whole past fourteen years* have been devoted by him almost exclusively to this discovery."

As Dr. Morton's practical acquaintance with etherization became more extended, he ascertained that the inhaling apparatus, which was elaborate and expensive, was not, after all, necessary. In Paris, as stated by Dr. Henry Bigelow in his pamphlet entitled "Ether and Chloroform," experiments, the majority of which had been failures, were successful when Dr. Morton's inhaling apparatus arrived, and not until that apparatus had been used did those gre

surgeons, Velpeau and Roux, declare, in the presence of the two academies, that the discovery was "a glorious conquest for humanity." Yet soon afterwards Dr. Morton demonstrated that the simple application of a sponge, saturated with ether and applied directly to the mouth and nostrils of the patient, was the most satisfactory mode of administering the vapor. Personally this was to him a loss, as there was no use for the apparatus purchased or contracted for by him, and either on hand or in process of manufacture. This appears by the following testimony of Joseph Burnett, esq., a leading druggist and chemist of Boston, and of O. P. Drake, esq., a maker of philosophical and chemical apparatus:

Joseph Burnett, being sworn, says:

"Interrogatory 5. State whether you have examined all the items of said account which purport to be charges for 'inhaling apparatus,' or portions thereof, or work thereon, and whether, from your knowledge of the information existing at the respective times said charges are dated, on the part of Morton or any other person, the sums so charged for the items named were deemed necessary or reasonable to bring said discovery before the public. Also state what was the character of your said knowledge.

"Answer. In my opinion, from the information I had on the subject generally, at the time, I should say they were not unreasonable for the purpose mentioned, having in view the fact that at first there was opposition to the ether, and that it seemed to be necessary to give unusual facilities to medical people, such as furnishing them with apparatus without charge, &c., to induce them to test the discovery. I give this as opinion merely. I have examined the items inquired about. My knowledge was derived from being quite conversant with the early history of the ether discovery."

O. P. Drake, apparatus and instrument maker, being sworn, says:

"Answer. I do. He did make great attempts. He spent a great deal of money in them, and lost a great deal. They commenced about the time I first knew him. They were continued whenever I had any knowledge of him. He had a large establishment in Tremont Row, and operators there to introduce the discovery. If it had not been for these efforts the thing never would have been introduced, perhaps, for a long time. They were exceedingly persistent and earnest; very much so."

A. E. Giles, being sworn, says:

"Answer. Yes; I have. In 1847 I first knew of his efforts in this behalf. I was employed by him, and know that his efforts have been persistent and continuous. They have been attended with great expense, time, and labor, with no satisfactory or adequate results. I conceive this discovery to be the most important and beneficial to mankind of the present age. Difficulties arose because people generally had, at first, the idea that the inhalation of sulphuric ether was dangerous. I have always considered that the perseverance of Doctor Morton in introducing the discovery to the world was the main thing which ultimately overcame the opposition to it arising from the cause named."

During the whole of the time above referred to, Doctor Morton was continually having circulated through this country and Europe printed publications calculated to bring his discovery into use, and was procuring the publication of articles in leading journals, setting forth the benefits of his improvements. He personally visited several of the principal cities of the United States in order to confer with practitioners who were adopting his discovery, and he kept up an extensive correspondence in which he indicated the safety and urged the general use of etherization. From the testimony of several editors and publishers showing the extent and variety of Doctor Morton's labors in promulgating his information, the following extracts are made:

Elizur Wright, now insurance commissioner, but well known as an ex-editor, being sworn, says:

"2d interrogatory. Have you any knowledge of any efforts, at any time, made by said Morton to introduce his said discovery to the public, to give the latter knowledge of it, and to bring it into general use? If yea, how long since did such efforts commence, to your knowledge? How long were they continued? What has been their character as respects earnestness and persistence? With what success have they been attended? If you know, state fully.

"Answer. I have. They commenced in about 1846. They have been continued ever since, so far as I know, and I have known up to within two or three years. They have been zealous, indefatigable, and enthusiastic. They must have given great knowledge to the public about the discovery. He has published reams about it. I have written, myself, I suppose, a dozen articles in relation to it.

"3d interrogatory. Do you consider said Morton a man of energy and persistence of character? Has he, so far as your knowledge extends, displayed those qualities in a marked degree, in bringing said discovery into public use? If yea, state what, in your opinion, would have been the result as to said discovery, had the same not been kept persistently before the public by said Morton.

"Answer. He is a man of great energy. I think he has. It might have been made by others, but it wouldn't have been brought into use so soon but for Morton."

Samuel M. Hobbs, late editor Boston Atlas and Bee, being sworn, says:

"I do know a great many such efforts. They commenced about the time I first knew anything about him. They have been kept up, to my knowledge, ever since, up to a short time. He has driven the matter just as hard and as energetically as a man could all the time I have known about him. They have met with the success of bringing the discovery very prominently before the public."

David Clapp, printer and publisher of Boston Medical Journal, being sworn, says:

"I was familiar with his efforts when he was here. These efforts commenced about the year 1846. They were continued whenever I knew anything about them. He always seemed to be very much engaged in them, and persevered constantly. So far as I know, I think they certainly had the effect to draw great attention to the discovery on the part of the public.

"Answer. I do; more than the average. Yes, I should think it had. I should think it would not have been known without his efforts. In 1847 Dr. Morton brought his discovery before Congress, and urged its adoption into the medical department of the United States armies engaged in the Mexican war. The committee to whom the subject was referred, however, terminated their investigations on the reception of a few letters unfavorable to the discovery, written by those who were beginning to zealously array themselves against its adoption. So anxious was Dr. Morton to give the soldiers and sailors engaged in the campaign, the benefits of etherization that he urged its adoption in the War and Navy Departments, stipulating that each administration of the vapor should cost but one or two cents. Owing to the professional distrust with which all innovations on old-established practice are regarded, this offer was also rejected."

Indeed, nothing but the most persevering and determined efforts on the part of Dr. Morton prevented the disuse of the discovery. For weeks after the two public trials at the Massachusetts General Hospital there was no application of etherization, and patients were operated upon as before. But the enthusiastic discoverer was determined that the public should enjoy the inestimable blessings of his discovery, and he fitted up, at his own expense, apartments for its appli-

tion. By the payment of a considerable bonus he obtained the immediate surrender of the leases of a building adjacent to his office in Boston, which he immediately had properly furnished and prepared for the performance of operations upon all who might desire to submit to them under the novel effects of etherization. At the same time he engaged several assistants to take charge of and to perform such operations; and as they were nearly all educated physicians, he was compelled to compensate them liberally for their time. Yet the remuneration received by him from patients was but little or nothing, as until the success and safety of the discovery became firmly established, the large number of those who submitted to etherization did so either from curiosity or at the earnest solicitation of Dr. Morton or his assistants.

By the efforts and expenditures which have been briefly detailed, Dr. Morton was apparently succeeding in bringing his discovery before the public, when he was arrested by a formidable opposition, which, for a time, paralyzed his exertions, and involved him in pecuniary embarrassments of a ruinous nature. This opposition first manifested itself in an organized attack upon him and his discovery by a large number of the dental profession in Boston. This attack, and the opposition from this source, was followed up for a great length of time with persistent virulence, its originators asserting and professing to cite authentic and conclusive instances of actual cases in which ether had produced the most dangerous effects upon patients who had been treated with it. Published matter was circulated by these parties throughout the country, with the design and result of stirring up a general feeling of distrust and hostility. To such an extent were these measures carried that in a short time a violent tide of public feeling was excited against said discovery; to overcome which his time and efforts were required for a protracted period. Widely circulated articles in leading medical journals in different parts of the United States were published setting forth the danger of the new agent, and strongly urging the abolition of all use of it on the part of the medical profession, and the discountenancing of it by the public at large. In consequence of the general suspicion aroused by these persistent and systematic attacks, Dr. Morton speedily found the public feeling growing hostile to his discovery, and to such a degree that in a short time he found himself deserted by his patients. Hence he was forced to relinquish his apartments, and as he had received but a trifling recompense, as has been already stated, for operations therein performed, the expense incurred by the purchase of the lease and the cost of fitting up left him in an embarrassed condition, while he was the object of widespread and virulent attacks, and his discovery was heralded as not only worthless, but as injurious. These facts are fully substantiated by a large amount of testimony from leading physicians, surgeons, and business men of Boston, from which a few extracts are selected:

Henry J. Bigelow, M. D., physician and surgeon, Boston, being sworn, says:

"New experiments, and many of them, were to be made. Great probable danger was to be encountered and great responsibility assumed, even to the extent that had Dr. Morton killed somebody with the new agent, of which Sir Benj. Brodie long after said that 'it had killed guinea-pigs, and that the great question was whether it was safe,' he would very likely have been indicted for manslaughter, in rashly and ignorantly experimenting with an untried and powerful agent.

"He has always been full of it. Before it was generally adopted he did, I should think, everything which a man could to introduce it."

Augustus A. Gould, physician, Boston, being sworn, says:

"There was a strong opposition to it in this city, and more especially elsewhere. The administration of it was denounced generally, and many articles were written against it in the medical and daily journals. I don't know that any

thing further was attempted than writing articles, and denunciations in private conversations.

"Dr. Morton wrote and talked too. I have seen several pamphlets prepared, I suppose, at his instance and at his expense.

"While he boarded with me, which was two or three months during its earliest administration, he was overwhelmed, day and night, in managing the administration and introduction of ether. He became very nervous, and lost strength. As to his business I have no acquaintance.

"There was much indignation and disapprobation from many of the profession, especially from the dentists, and also in several instances by patients. In one or two instances prosecutions were threatened, not particularly on account of the mode of administration, but for administering it at all, and for the injurious effects supposed to be in consequence."

Joseph Burnet, druggist and chemist, of Boston, being sworn, says:

"Interrogatory 7. How much of Dr. Morton's time was devoted to the introduction and defence of ether during the first six months or year after its introduction?

"Answer. I should say almost entirely.

"Interrogatory 8. What had been the state of his business up to that time? What effect had these labors of his upon it?

"Answer. It had been at times very flourishing, and was, I think, a growing business. These labors of his injured his business, of course. He neglected it, and it fell off.

"Interrogatory 9. Had his labors in the matter of ether any, and what, effect on his health?

"Answer. It injured his health and affected his whole nervous system—this constant excitement. It rendered him weak, so much so that he was obliged to employ a physician; he took medicine at that time, and active remedies.

"Interrogatory 10. Whether or not, after the introduction of ether, Dr. Morton enlarged his premises, and had numerous assistants whom he had not before had?

"Answer. Yes; he enlarged his premises, and I remember two or three extra assistants.

"Interrogatory 11. Whether or not, after the introduction of ether, Dr. Morton's rooms were thronged by persons who wished to avail themselves of the painless extraction of teeth?

"Answer. A great many persons went there to have their teeth extracted without pain. I never saw his room filled.

"He labored very constantly and very energetically in employing agents, publishing books, and advertising. There was a feeling of considerable hostility on the part of the dentists towards Morton. They held a meeting or meetings on the subject, and published a circular, which I heard one of Morton's agents say he met with in almost every State of the Union."

In order to refute the assertions of his opponents, and to overcome the opposition to the more general introduction of his discovery, Dr. Morton the more industriously put in circulation facts demonstrating its value. The mass of information received by him in letters from scientific men and eminent practitioners at home and abroad, the regular reports made to him by his own professional assistants throughout the country, with the results of his own practice and continued researches, were all carefully digested and at once published. He thus disseminated a large amount of new and valuable information at brief intervals, which convinced the most sceptical, instructed those professional men who were disposed to use the newly discovered agent, and indoctrinated the people of the Old and New World with a well-founded faith in the use of anæsthetic agents. Many medical men in the United States who had at first looked

with distrust upon what they regarded as an innovation on their established system of practice, now frankly admit that they were forced to change their opinion by the reports on etherization which emanated from the leading surgeons and physicians of Europe, at once republished and circulated throughout the United States by Dr. Morton and those whom he had enlisted in promulgating the new discovery.

The cost of preparing and of distributing these documents, the necessity for them existing, as before said, for an extended length of time, was very great, and there is abundant evidence that but for Dr. Morton's indefatigable efforts at this time, involving the ruin of his health, his professional practice, and his pecuniary means, the discovery would have been driven out of use, and the public would have been deprived of its benefit. These assertions are thus established:

George Hayward, M. D., being sworn, says :

"Ever since I have known Doctor Morton he has seemed to me to think of nothing but ether, and of making the world admit his claim to a proper proportion of the merit of the discovery. I consider that his labors to give the benefit of it to the public could hardly be exceeded by any one."

J. Mason Warren, physician and surgeon, Boston, being sworn, says :

"I have known considerable about such efforts, and they have always, as far as my means of information extended, been earnest, persistent, and well calculated to effect a speedy recognition of the value of etherization. It early became widely adopted, and since then he has, when I have seen him, been constantly engaged in establishing his right to his preponderating share in making the discovery."

Theodore Metcalf, of Boston, being sworn, says :

"I have known of frequent attempts by Doctor Morton of the nature inquired about. From the first of his bringing out said discovery, I have had knowledge that he devoted himself to it constantly, pursuing the matter unceasingly and with unflagging energy—I may say enthusiasm. Indeed, I have never known anything about him when he has not seemed entirely wrapped up in etherization. He has constantly been working, and writing, and publishing about it."

Robert J. Burbank, counsellor-at-law, Boston, being sworn, says :

"Dr. Morton did make great efforts, in the winter of 1845-'46, to introduce to the public his discovery, and he has been active in such efforts ever since. He is a man of *very great* energy, and in my belief he has applied himself with *all* his energy to the introduction of his discovery to the public."

J. P. Putnam, being duly sworn, says :

"Ever since I have known anything about him, he has been wrapped up in etherization, doing all he could to push it, and to establish his rights to his share in making it."

Medical men now admit the value and importance of the discovery in glowing language. The venerable and sage Doctor Warren, who performed the above operation, says :

"A new era has opened to the operating surgeon! His visitations on the most delicate parts are performed, not only without the agonizing screams he has been accustomed to hear, but sometimes with a state of perfect insensibility, and occasionally even with the expression of pleasure on the part of the patient. Who could have imagined that drawing the knife over the delicate skin of the face might produce a sensation of unmixed delight? That the turning and twisting of instruments in the most sensitive bladder might be accompanied by a beautiful dream? That the contorting of ankylosed joints should co-exist with a celestial vision? If Ambrose Paré, and Louis, and Dessault, and Ches-

selden, and Hunter, and Cooper, could see what our eyes daily witness, how would they long to come among us and perform their exploits once more! And with what fresh vigor does the living surgeon, who is ready to resign the scalpel, grasp it, and wish again to go through his career under the new auspices!"

The grave and sedate Liston says:

"Hurrah! Rejoice! Mesmerism and its professors have met with a 'heavy blow, and great discouragement.' An American dentist has used ether (inhalation of it) to destroy sensation in his operations, and the plan has succeeded in the hands of Warren, Hayward, and others, in Boston. Yesterday I amputated a thigh, and removed, by revulsion, *both* sides of the great toe nail, without the patient being aware of what was doing, so far as regards pain. The amputation-man heard, he says, what we said, and was conscious, but felt neither the pain of the incisions, nor that of tying the vessels. In short, he had no sensation of pain in the operating theatre. I mean to use it to-day, in a case of stone. In six months no operation will be performed without this precaution."

The importance of Dr. Morton's discovery having thus been fully established, it speedily met with the recommendation of the medical officers of the national government, and was, by the authorization of the proper departments, introduced into the public service in the army and navy, but without any compensation being then or ever made to him for such appropriation, and without reference to the careful protection thereof which he had secured by the letters patent.

Although the public, when apprised of this disregard by government of its own promised protection of the rights of the discoverer, at once commenced to avail themselves of the discovery, Dr. Morton had secured a great advantage from his letters patent. Had it been known that all could administer and experiment with the then mysterious agent, when its marvellous power was first announced, and before it had been fully and fairly tested by scientific men, the most disastrous results might have followed.

John C. Warren, p. 34, "Etherization," 1847, says: "It was proposed in France to pass an ordinance to prohibit the sale of ether, excepting under the prescription of a physician." (For reasons more particular, see p. 33, same as above.) While protected by the letters patent, this agent was wholly in the hands of professional men, instructed by Dr. Morton either in person or through his assistants, and care was taken that only a pure article was used. Accidents, which might have been frequent and fatal if quacks and pretenders could have used the discovery, without instruction or information, were guarded against, and the employment of so dangerous an instrument by burglars or other criminals was effectually prohibited.

Having perfected his discovery, surrounded it with scientific safeguards, and received the indorsement of the leading practitioners of Europe and America, Dr. Morton had no longer any desire for protection against what otherwise might have been a fatal and pernicious use of the agent which he had so carefully introduced for the relief of suffering humanity. Desirous that it should be widely and generally used, he had ever felt that he would receive his reward from the nation rather than from individuals, and that the profession and the public would regard the mere question of patent as very insignificant compared with the discovery itself, or the gratitude due for it; besides, a patent in the profession to which Dr. Morton belongs is not the subject of unfavorable comment.

No sooner was it conclusively established that Dr. Morton had discovered a remedial agent, of priceless value to suffering humanity, and that it had been appropriated by the general government, than the medical and surgical staff of the hospital in which he made his inaugural experiments united in an appeal to Congress that he should be reimbursed for his great outlay of money, and

appropriately remunerated for the great boon which he had conferred, not only upon the nation, but upon the world.

Much has been said, when speaking of the difficulties under which Dr. Morton has labored, of the pecuniary losses which have resulted to him in consequence of the discovery. It has been stated in broad terms that they were heavy, but the figures of the sums themselves can alone furnish a proper realization of how large these were:

William T. G. Morton in account with his discovery, from October, 1846, to 1863, Dr.

1847: Translating and publishing several editions of report of American cases and other documents for use abroad, with expenses of their transmission, with ether and apparatus, together with postage, freight duties, and cost of foreign correspondence.	\$2, 860
Various professional and scientific men, for services rendered in promulgating discovery, collecting cases, demonstrating value where opposition existed, together with their travelling expenses*	3, 162
Various literary gentlemen, for procuring favorable opinions of the press, preparation of replies, and other papers, with salary of private secretary	2, 100
Printing and publishing of papers and pamphlets during introduction of discovery, newspaper articles, circulars, &c., &c.	4, 326
Ether distributed among professional men†	2, 640
Apparatus distributed among professional men†	3, 060
Apparatus remaining unsold	2, 000
Deficiency in patent account§	2, 000
Hotel and travelling expenses from time of discovery to date, with hack-hire, telegraphing, expressing, &c., &c., \$1,000 per annum 	17, 520
Printing and publishing, &c., from 1847 to date¶	5, 999
For services, to Messrs. Webster, Choate, Carlisle, Curtis, Whiting, Dana, Cornwall, and others, together with advice and other services rendered	12, 550
Expenses for testimony <i>in perpetuum</i> at Boston, Hartford, and other cities, including examination of witnesses, drawal of papers, travelling expenses, &c.	4, 870

* These were usually young physicians, who, whenever a fatal case or non-success was reported, as was constantly being done during the days of opposition, were instructed in the method of administration, and sent by Doctor Morton to counteract the feeling. Visits were paid by them to New York, Philadelphia, Montreal, and even some of the cities of the far west.

† This will not seem so surprising when it is recollected that at the time Doctor Morton made his discovery, the article called pure washed sulphuric ether was scarcely found outside of a chemist's laboratory. As there was no call, and but seldom any use for it, few druggists kept it in their stores. During the first year after the discovery, it was prepared expressly for Doctor Morton, and this, with the strong bottles manufactured for its safe transmission, cost nearly one dollar per pound.

‡ The inhaling instruments, at first, cost about \$25 apiece; but by gradual alteration, and by making large contracts, the price was afterward reduced to \$7 or \$8.

§ As a few licenses were sold to members of the dental profession, where a patent is not the subject of comment, Doctor Morton's patent agent kept an account of expenses and the receipts. This item shows the result.

|| Large as this sum is, it by no means includes all the expenses. Those who have endeavored to push a claim before Congress, or have lived winter after winter at Washington, can fully appreciate why it should be even much more.

¶ Items not classified.

Recording of testimony in Boston.....	\$169
Cost of manufacture of nitrous oxide gas for experiment at Washington*.....	50
Expense for testimony of medical and surgical, literary, scientific, and other gentlemen, also assistants to aid in collecting the same, stationery, copying, printing, binding, postage, and distributing the same to still further refute opponents, overcome opposition, expense of the suit suggested by the President of the United States as a prerequisite to paying Doctor Morton.....	10, 255
Interest.....	42, 000
Sacrifice of income 17 years, proved to be worth \$10, 000 per annum, but put down in this account at only one-half that sum†.....	85, 000
Total.....	200, 561

Joseph Burnett, esq., a chemist of Boston, testifies as follows :

"Interrogatory 8. What had been the state of his business up to that time? What effect had these labors of his upon it?"

"Answer. It had been at times very flourishing, and was, I think, a growing business. These labors of his injured his business of course. He neglected it, and it fell off."

In this condition of things, the petitioner, on the 23d of February, 1849, filed his petition in the House of Representatives, asking compensation for his services to his country in the discovery and the surrender to the public use this most important medicinal agent. The matter was fully and carefully investigated, and the committee, after a most careful consideration of the matter, expressed the opinion that the said petitioner was the true discoverer, but referred the question of compensation to the House, and nothing more was done about it.

In the year 1852 he again petitioned, and after a very thorough examination, a select committee of the House agreed to and drew up a report in his favor, which was not actually presented to the House for want of time, but was certified to by the Clerk of the House of Representatives. The report so prepared considered the evidence as to each and all the claimants, and concluded in favor of the claim of Dr. Morton. They prepared a bill for his relief, but the business of the House rendered it impossible to present it. In their prepared report the select committee say: "The committee of the House of Representatives and the Military and Naval Committees of the Senate fully concur in the recommendation."

* This was for the trial demanded by Doctor Morton to disprove to the satisfaction of the congressional committee the claim of Horace Wells, by showing the inert character of the agent for the purposes of anæsthesia.

† This sum is probably much below the truth. The gross receipts of Doctor Morton, from his business, have been shown in a previous chapter. On the 1st of May, 1847, (that is, but a few weeks before his business was ruined by the causes before stated,) an agreement was made with Messrs. Blaisdell & Hayden, by which they were bound to pay Doctor Morton 50 per cent. on all the gross receipts from the business then on hand and to come, he to be at no expense for rent, materials, tools, &c. One item of the business, then under way, and mentioned in the agreement, was twenty full sets of teeth, valued at about \$4,000. The books of Doctor Morton were examined for three successive years previous to his discovery, and the net profits were found to be ten thousand per annum. Doctor William Leavitt, who kept Doctor Morton's books several years, says he always understood his practice was worth about ten thousand dollars per year. Only one half of the stated amount of income is estimated in the above account; this for seventeen years would amount to \$85,000, the item in the account.

The chairman of the select committee, finding it impossible to get the bill up in the House, and feeling the great wrong of withholding remuneration from one who had done so much for the public service, addressed a letter to the chairman of the Committee on Naval Affairs of the House of Representatives, the object of which was to urge upon his consideration the practicability and propriety of attaching the bill so by him prepared to the military and navy appropriation bill for the then ensuing year. The chairman of that committee addressed a letter to the Secretary of the Treasury, the War, and Navy Departments, from whom he received replies, stating their opinion of the vast value of the boon conferred upon his country by Dr. Morton, accompanied by a report from the chief of the Bureau of Medicine and Surgery of the navy. The matter was submitted to the consideration of the Military and Naval Committees of the Senate, and each, by resolution, recommended an amendment to the army appropriation bill in the following words:

"To enable the President of the United States to procure the surrender of the patent issued to Wm. T. G. Morton, on the 12th day of November, 1846, for his discovery of the anæsthetic properties of sulphuric ether, one hundred thousand dollars."

Which resolution was moved in the Senate by Dr. Borland, but being out of the usual course of business, was lost, leaving the matter again at large, the aim, however, supported by the opinion of the Military and Naval Committees of the Senate.

Early in the second session of the 32d Congress, 1852, the subject was brought before the Senate on the memorial of Dr. Morton, and later in the session upon petition of the members of the Massachusetts Medical Society, on which, as on former occasions, counter claims were presented. The chairman of the committee having examined the case, very fully expressed a reasoned opinion in favor of the claim of Dr. Morton; but the accumulated evidence then amounted to over 1,000 pages, and as there was not time to discuss and settle the question fully in the two houses, it was determined, at the suggestion of the petitioner, that an appropriation should be made for the benefit of the discoverer, the title to discovery to be settled in a court of justice. This was commended to be introduced as an amendment to the army appropriation bill. It passed the Senate, but was lost in the House. This bill passed the Senate again in 1854, but with no better success in the House.

It seeming impossible, from causes wholly irrespective of the question of right, to obtain relief by the action of Congress, and being encouraged by the favorable reports from committees to whom the claim was referred, and the favorable notice of executive and military officers, he determined to apply at once to the President, believing it to be quite within his power, as commander-in-chief of the army and navy, to give an order that would compel the compensation which right and justice demanded. He, accordingly, on the 15th day of June, 1854, addressed the following petition to the President of the United States:

To his excellency the President of the United States, and the Hon. the Secretary of War, the Secretary of the Navy, and the Secretary of the Treasury of the United States:

"The undersigned, William T. G. Morton, M. D., respectfully represents and makes known, that he, the undersigned, is the original and first discoverer of actual anæsthesia, and that he holds the letters patent of the United States for said discovery, and for certain means of applying the same; which said letters patent bear date the twelfth day of November, in the year 1846, and do run to the undersigned and his assigns, for the term of fourteen years from the date thereof, the exclusive right and liberty of using, and vending to others

to be used, the said discovery of practical anæsthesia; to which said letter patent, of record in the United States Patent Office, he respectfully refers.

"The undersigned, from motives which must be apparent from the nature of the subject, and relying upon the justice and magnanimity, first, of his own government, and then of all other civilized governments, has not hitherto exercised his legal rights by suits at law for damages, or injunctions to prevent the use of a discovery which has happily proved so beneficent to humanity. Nor would he now take any step by way of departure from his previous course, but that his forbearance is sought to be turned to his disadvantage, and objection is made to granting compensation by an act of Congress, on the ground that he ought to enforce his right under his patent against the officers of the United States using his discovery in the military, naval, and marine service, and against all persons violating the same.

"These considerations have determined the undersigned to adopt this course. He therefore, with great reluctance, respectfully asks that the encouragement given to private individuals to violate his patent, through the non-observance thereof by the government itself, may be no longer continued, and that the honorable Secretaries will either purchase the right to use said discovery in the respective branches of the public service, or that they will immediately issue the necessary orders to the medical officers and others under their official control to desist from further infringing his patent right in the premises.

"WM. T. G. MORTON, M. D.

"WASHINGTON, June 15, 1854."

This petition was accompanied with the recommendation of a majority of the two houses of Congress, and with favorable reports from the medical bureaus of the War and Navy Departments, which your committee here subjoin.

"The undersigned, members of the Senate and House of Representatives concur in recommending that the right to use Dr. Morton's discovery, commonly called 'practical anæsthesia,' be purchased for the public service, or that the use thereof be discontinued, because the government is manifestly bound by its own patent, duly issued, to respect the said discovery as private property, and because '*private property*' ought not to be '*taken for public use without just compensation.*'" *

This was followed, as will be seen, by one hundred and fifty signatures. Of these, Mr. Mallory, Mr. Seward, and Mr. Weller signed under the following qualification: "I respectfully suggest that the patentee of the anæsthetic agent, known as Dr. Morton's discovery, should receive from the United States a *liberal* compensation for their past and future use of it."

United States senators.—James C. Jones, John Bell, Tennessee. George W. Jones, Iowa. Ben. Fitzpatrick, C. C. Clay, jr., Alabama. A. G. Brown, S. Adams, Mississippi. James Shields, J. D. Bright, Illinois. J. P. Walker, Henry Dodge, Wisconsin. J. B. Thompson, Kentucky. Charles T. Johnson, Philip Allen, Rhode Island. J. W. Williams, H. Hamlin, Maine. Charles Sumner, Julius Rockwell, Massachusetts. James Cooper, Pennsylvania. John B. Weller, W. M. Gwin, California. J. M. Clayton, Delaware. W. K. Sebastian, R. W. Johnson, Arkansas. Sam Houston, Texas. Wm. H. Sewall, New York. Arch. Dixon, Kentucky. J. P. Benjamin, Louisiana. B. Wade, S. P. Chase, Ohio. S. R. Mallory, A. C. Dodge, Florida.

Representatives to Congress.—Samuel P. Benson, Samuel Mayall, E. Farley, I. Washburn, jr., T. J. D. Fuller, Maine. Samuel H. Walley, Al

e Witt, Charles W. Upham, Thomas D. Eliot, J. Z. Goodrich, N. P. Banks, Edward Dickinson, J. Wiley Edmands, Samuel L. Crocker, Massachusetts. Ivah Subin, Vermont. B. B. Thurston, Thos. Davis, Rhode Island. Thos. J. Cumming, T. R. Westbrook, John Wheeler, Gerrit Smith, Peter Rowe, William M. Tweed, Charles Hughes, G. Dean, Jared V. Peck, R. W. Peckham, Bishop Perkins, Henry Bennett, George Hastings, A. Oliver, New York. A. J. M. Pennington, George Vail, New Jersey. Roland Jones, Louisiana. Kendrick B. Wright, Thomas B. Florence, W. H. Witte, Asa Packer, Nerridleswarth, John Robbins, jr., William Everhart, Joseph R. Chandler, J. laney Jones, C. M. Straub, C. B. Curtis, Thomas M. Howe, Pennsylvania. Jacob Shower, Maryland. G. R. Riddle, Delaware. H. H. Johnson, Thomas ichey, Lewis D. Campbell, W. R. Sapp, J. R. Giddings, Ed. Wade, M. H. ichols, J. S. Harrison, J. L. Taylor, A. Harlan, Ohio. W. A. Richardson, ames Knox, E. B. Washburne, J. O. Norton, John Wentworth, Richard ates, J. C. Allen, Willis Allen, Illinois. H. L. Stephens, Michigan. Sion f. Rogers, W. S. Ashe, R. C. Puryear, John Kerr, H. M. Shaw, North Carona. James L. Orr, P. S. Brooks, W. W. Boyce, L. M. Keitt, South Carolina. J. A. Reese, Georgia. James Abercrombie, W. R. Smith, J. F. Dowdell, J. Phillips, Alabama. A. E. Maxwell, Florida. William Barksdale, William Barry, D. B. Wright, W. P. Harris, O. R. Singleton, Mississippi. Samuel aruthers, M. Oliver, John G. Miller, James J. Lindsley, A. W. Lamb, Missouri. A. B. Greenwood, Arkansas. F. K. Zollicoffer, William Cullom, m. Etheridge, R. M. Bugg, Fred. P. Stanton, N. G. Taylor, Wm. M. Churchell, Tennessee. John C. Breckinridge, William Preston, L. M. Cox, R. H. anton. John M. Elliot, James S. Chrisman, C. S. Hill, Kentucky. D. Stuart, ickigan. Ben. C. Eastman, John B. Macy, Daniel Wells, jr., Wisconsin. Daniel Mace, Indiana. Bernhart Henn, J. P. Cook, Iowa. P. H. Bell, Texas. J. A. McDougall, M. S. Latham, T. S. Russell, California.

"NAVY DEPARTMENT, *July 25, 1854.*

"SIR: The printed documents, &c., having relation to anæsthetic agents, which were left by you at the department, were referred to Surgeon Whelan, Chief of the Bureau of Medicine and Surgery, who has returned them with a letter containing some general expressions of the value and importance of such agents in medicine and surgery, a copy of which you will find enclosed, together with the printed papers referred to.

"I am, very respectfully, your obedient servant,

"J. C. DOBBIN.

"W. T. G. MORTON, M. D.,

"*National Hotel, Washington, D. C.*"

"NAVY DEPARTMENT,

"*Bureau of Medicine and Surgery, July 24, 1854.*

"SIR: I have the honor to acknowledge the receipt of your communication of the 21st instant, covering sundry printed documents on the subject of anæsthetic agents, submitted to the Navy Department by Dr. Morton, in which 'my views touching the subject-matter presented' are requested.

"Without desiring to involve myself in the controverted point of the discovery of anæsthetic agents, the objects of the department in its reference of the subject to this bureau may possibly be subserved by some general expression of their value and importance, and the almost universal employment of these agents under different names, but nearly identical in effect and mode of administration, in a vast proportion of grave injuries and painful diseases.

"So general is the use of anæsthetic agents, such is the confidence of the profession in the uniformity and safety of their effects, that medicine and surgery

would be divested of one of their ablest allies if any circumstance should arise to deprive them of the employment of a class of pain-destroying agents whose popularity and appreciation keep pace with their diffusion. I regard the discovery of anæsthesia as one of more importance in many senses than any of those triumphs of genius which have conferred immortality and fortune on their authors; for it alone interests every condition and calling of humanity, and is a widespread in its application as the primal cause of pain, which it so effectually destroys.

"I believe there is scarce an intelligent physician or surgeon in either hemisphere who has not had occasion to use these agents, and whose judgment does not indorse their value.

"Sulphuric ether was adopted in the navy soon after the discovery of its peculiar properties; it still continues to be largely used, and for some years has formed an item in the 'allowance table of medicines.'

"In one of the documents accompanying your communication, a report by a select committee of the House of Representatives, (first session, thirty-second Congress, pages 86 and 98,) will be found two communications from the then chief of the Bureau of Medicine and Surgery, which so fully embody my own opinions of the value and importance of anæsthetic agents that I respectfully invite your attention to them. In the same document (pages 102, *et seq.*) are recorded the commendatory opinions of numerous medical officers of the navy.

"The character of anæsthetic agents seems now to be settled beyond dispute; their great importance in medicine and surgery is recognized by a unanimity of opinion rare, indeed, in medical matters; for throughout the profession anæsthesia is not inaptly hailed as one of the greatest boons conferred by science on suffering humanity.

"To estimate the pecuniary value of such a discovery, if I am called upon to do so, is not so easy a matter. If the action of the British Parliament in the case of Jenner—one of closest analogy—be received as a standard of judgment, the sum of one hundred thousand dollars, the amount named on several occasions by Congress, does not appear to me to be beyond the worth of this only panacea for most of the ills that flesh is heir to.

"Very respectfully, your obedient servant,

"W. WHELAN.

"Hon. J. C. DOBBIN,

"*Secretary of the Navy.*"

At the same time that the reference was made by the Secretary of the Navy to the medical bureau, the communication which had been handed the Secretary of War was referred by him to the medical bureau of the army, as is shown by the following reply:

"SURGEON GENERAL'S OFFICE, July 17, 1854.

"SIR: A communication addressed to the President of the United States and to the Secretaries of War, of the Navy, and of the Treasury, by William T. G. Morton, M. D., in which the writer, after representing that he holds letters patent of the United States for the discovery of 'practical anæsthesia,' requests that the right to use that discovery in the public service be purchased, or that order be issued to the medical and other officers under government control to desist from further infringing his patent right, having been referred to me for a report I have the honor to submit the following remarks:

"The great importance and value of practical anæsthesia has been recognized and admitted by physicians and surgeons throughout the civilized world. To my own views on this point, and for evidence that washed sulphuric ether and other anæsthetic agents are regularly supplied to and used by the medical officer of the army, you are respectfully referred to the enclosed copy of a communica-

on, addressed by me to Dr. Morton, on the 1st of March 1852, and your attention is also invited to the printed copies of communications from the late chief of the Bureau of Medicine and Surgery in the navy, and other physicians and surgeons of distinction which are to be found in one of the pamphlets accompanying the present memorial of Dr. Morton.

"Confining my remarks more particularly to the special subject now presented by Dr. Morton, I have to state that if it should satisfactorily appear to those having the ability and the authority to decide that the letters patent held by Dr. Morton do really cover the exclusive right of using, and selling to others to be used, those anæsthetic agents which have been successfully introduced into the practice of medicine and surgery for anæsthetic purposes, it would seem that the government of the United States is bound, in virtue of a provision in the Constitution to that effect, as well as in justice, to pay Dr. Morton for the use of his property heretofore, and either to desist from the further employment of those articles in the public service for anæsthetic purposes or to acquire the legal right to their use by purchase.

"It appears, on examination of a paper appended to Dr. Morton's communication, that 32 senators and 118 members of the House of Representatives 'concur in recommending that the right to use Dr. Morton's discovery, commonly called "practical anæsthesia," be purchased for the public service, or that the use thereof be discontinued, because the government is manifestly bound by its own patent, duly issued, to respect the said discovery as private property, and because "private property" ought not to be "taken for public use without just compensation."'

"Presuming that the army, navy, and commercial marine of the United States will not be debarred from all participation in the benefits arising from a discovery which has been pronounced, and in reality is, 'one of the greatest boons ever given to suffering man,' it may be proper, though I am not specially instructed so to do, to furnish some data upon which an estimate of the amount which, in my opinion, the patentee may reasonably demand from the government for the past and future use of anæsthetic agents in the army, navy, marine corps, and marine hospitals of the United States.

"The British Parliament bestowed upon Dr. Jenner, the discoverer of vaccination (to which the discovery of practical anæsthesia may properly be compared) the sum of thirty thousand pounds. The select committee of Congress, who have had this subject under consideration, have recommended that the sum of one hundred thousand dollars be appropriated to Dr. Morton for the privilege of using the discovery.

"In both of those instances it was intended, I believe, by the governments, respectively, to give benefits of the discovery to the world.

"Without, then, going into a calculation of the amount of compensation to be furnished from each branch of the public service, it is respectfully suggested that the sum of one hundred thousand dollars, as proposed by the select committee of the House of Representatives and also by the Military and Naval Committees of the Senate, be awarded to the patentee for all his right in the premises, and that the benefits of the discovery be given to the world at large.

"I have the honor to be, very respectfully, your obedient servant,

"THOMAS LAWSON,

"*Surgeon General.*

"Hon. JEFFERSON DAVIS,

"*Secretary of War.*"

The President at first seemed favorably impressed, and promised to forbid the use of the ether or pay the proposed sum, but afterwards declined to do it until the judgment of a judicial tribunal should determine the right. The petitioner, therefore, on his suggestion, brought suit against one of the United States officers

who had used this discovery in the marine hospital, and after two years and expending a good deal of money, received a judgment against him.

On the rendition of this judgment a new administration was in power. The record of the trial and judgment was taken to the Secretary of the Treasury inasmuch as the marine hospitals were under that executive department, but the gentleman (now a member of the confederate government) stated that before settling he wished Dr. Morton to test his claim by bringing further suits, and did nothing whatever.

This transaction appears by the accompanying statement of a conversation with the President, which took place in the presence of Mr. Barksdale, of Mississippi, and published as early as 1858, and a letter of the honorable William H. Witte, member of Congress, addressed to the President of the United States detailing his conversation with him on the subject :

On emerging from his sick-room, in the early part of May, 1855, in comparison with Mr. Barksdale, of Mississippi, through whose agency it had been arranged Dr. Morton held an audience with the President, and then, for the first time learned the result of this two years of "circumlocution." Before paying any sum for the patent, the government wished a legal decision on the case; it had decided that a judgment should be procured against it, so that it should be compelled to make restitution. In reply to the President, who asked why a suit had not been before brought, Dr. Morton replied, *that owing to the peculiar nature of his discovery, he had never wished to take legal steps for redress; that he had all along been led to suppose that the government would in the end act honestly* and, for the good of humanity, do, of its own free will, an act of justice, to which it was repugnant to human nature to compel it. To this the President replied that no feeling of that kind need deter him; that the prosecution was to be for its use in the public service, and a mere form, as the decision of the court would give them authority for immediate action. He then proposed that a suit should be commenced against some surgeon of the government service who had at some period used the discovery; that the suit, when brought, should be considered as brought against the government and not against the surgeon, and that the government should shoulder all the responsibility. He closed by saying, that when it was decided that the government was violating Dr. Morton's patent the government would pay, and that Dr. Morton might take his choice as to the tribunal before which to have the case tried.

"SIR: The honorable the Attorney General has this morning informed me that the government declines acting at this time in the case of Dr. Morton, assigning as a reason that the patent covers too much, and also that the Secretary of War does not favorably construe the scientific question involved—in fact an effect denying the validity of the patent.

"As an answer to the first point it is only necessary to repeat the clear and unequivocal assurance made to me on more than one occasion by your excellency that the binding force and validity of the patent should not be disturbed should not be adjudicated by the executive ministerial authority of the government, but that it should be construed by the import obviously expressed by its face, and that Dr. Morton should be dealt with in the premises according to that spirit of partiality and rigid justice which it becomes the power of a great government to extend toward one of its own citizens.

"In reply to the objection, now for the first time presented by the Secretary of War, I beg leave to refer to his own report made to your excellency, in which after discussing the scientific view of the case, he concludes with the clear expression of his opinion that Dr. Morton is the person to whom compensation ought to be made, and that the only point left undecided by him is the method in which, and the extent to which, payment ought to be made.

"With this report you expressed yourself so well satisfied that upon one of

on you, with pen in hand, did me the honor to counsel with me how the matter should be managed to the departments not to use the agent (until settlement had been made) but to be issued so as to best serve the interests of Dr. Morton, and thereby secure the equity of his claim.

You were also on that occasion kind enough to desire me to say to Dr. Morton that it would be better that he should not remain in Washington, but go home and rest contented with your assurance that the matter should be satisfactorily adjusted, and that you preferred to close the business with me rather than employ a lawyer, at the same time giving him the advice not to spend his money in consulting lawyers, as there was no necessity, there being nothing in it which you could not settle.

It was in this aspect of the case, relying upon your declaration and absolute promise, that I was induced to render to Dr. Morton pecuniary assistance which the necessities of his situation imperatively required, never dreaming that you would fail to do yourself, or to permit others to refuse doing, an act the justice and necessity of which you had more than once clearly admitted.

And yet, now, after the lapse of *fourteen months* induced to come here often, I always at the sacrifice of my interests at home, I am told that there is nothing in the case; that the government refuses to acknowledge the slightest injury to the claim; but, shielding itself behind legal quibbles and scientific technicalities, coolly and complacently pronounces its former assurances and promises of compensation and justice as nothing—as nothing, because it refuses now to do what it repeatedly declared should be done.

Well, sir, we must make submission, and we do submit in that feeling which increased helplessness makes to wrong and power.

In conclusion, sir, permit me to express the regret that you did not in your intercourse with me upon the subject, deal with me in such a manner as to prevent me from involving myself (relying upon your assurances) largely to my pecuniary disadvantage, as well as to my personal mortification.

"I have the honor to be your obedient servant,

"WM. H. WITTE."

Thus far the efforts of the petitioner to obtain compensation for his labor, mental and corporeal, his services, his pecuniary expenditures in giving to his country the inestimable boon of his discovery, were attended with anxiety, disappointment, and loss. But he at last met with sympathy to cheer him and generosity to aid him in his hitherto disheartening progress. It came from the medical profession of the United States who are, of all men, the best qualified judge of the fact of the discovery and of its value. Their reading renders them familiar with the state of knowledge at any and all times on kindred subjects, and every step in advance at all worthy of consideration is published in their periodicals, discussed in their lecture-rooms, and read and considered by them in all parts of the civilized world. After full consideration and discussion, over hundreds of thousands of experiments running through a period of many years, the profession has all become satisfied of the vast utility of the discovered anesthetic agent and its kindred ethers; and as a body, with some rare exceptions, they are convinced that the petitioner, Dr. Morton, is the original discoverer. This is abundantly shown by the proceedings of the faculty of Boston, New York, and Philadelphia, which your committee has before them, and herewith annex as deserving the attention of the Senate. It is the verdict of men, the very elite of their profession, who, in a matter that so deeply concerns it, are not likely to be deceived. Your committee offers no apology for presenting these proceedings in full. The importance of the subject justifies and indeed demands it.

*Testimonial to Dr. Wm. T. G. Morton.*BOSTON, *Massachusetts, United States of America*, 1861.

More than fourteen years have elapsed since the first application of sulphur ether as an anæsthetic agent. During this period its use has been extended over the whole civilized world; it has been employed in private dwellings, hospitals and upon the field of battle, and has been hailed as the most beneficent gift conferred upon mankind since the discovery of vaccination. It has enabled every human being to contemplate pain, disease, and death with comparative composure; and its loss, were such a thing possible, would be universally regarded as a calamity to our race.

The anæsthetic properties of ether, if before known, had never been before practically applied, and except for the courage, energy, and perseverance of Dr. Morton, they would not probably have been applied to this day. The peculiar claim of Dr. Morton is not merely that he introduced the use of ether, but that he first demonstrated the fact that the human system can be safely reduced to a condition in which it becomes unconscious of the sufferings of disease, the pains of surgical operations, and the pangs of childbirth. The same purpose has since been effected by chloroform and other agents, but it is not assuming too much to say that, except for the demonstration of this great fact of the possibility and safety of anæsthesia, their employment would never have been suggested.

But while all mankind have been benefited, Dr. Morton has been a loser, to a large amount, by his exertions, in a worldly point of view; and in consequence of the time consumed, the expenses incurred, and the suspension of his professional labors, he is less advantageously situated than before. This does not seem just, and it is now proposed to procure and present to him an adequate testimonial, not as a compensation, (for a full compensation is in its nature impossible,) but as a remuneration for his expenditure, and an expression of the deep and grateful sense entertained by his fellow-creatures of the inestimable benefit he has conferred upon them.

With the view of obtaining effectual co-operation in other places, a meeting of a committee of fifty gentlemen was held at the house of Dr. J. Mason Warren, January 26, 1861, and as a result of this meeting the following organization has been adopted. The aid of the medical profession, and the public in general, is now respectfully solicited to assist in carrying into effect this laudable purpose. It is proposed that a public subscription be instituted, the avails of which shall be paid into the hands of Amos A. Lawrence and John Lowell, of Boston, trustees, to be held, appropriated, and invested for the benefit of Dr. Morton and his family.

President.—Dr. James Jackson, emeritus professor of theory and practice of medicine, Harvard University.

Vice-Presidents.—Dr. Jacob Bigelow, president American Academy of Arts and Sciences; Dr. George Hayward, consulting surgeon Massachusetts General Hospital; Dr. S. D. Townsend, surgeon Massachusetts General Hospital; Edward Reynolds, consulting surgeon Massachusetts General Hospital; C. C. Felton, LL.D., President Harvard University; Dr. John Homans, president Massachusetts Medical Society, consulting physician Massachusetts General Hospital; Dr. John Jeffries, consulting surgeon Massachusetts General Hospital; Jared Sparks, LL.D., Cambridge, Massachusetts, late president of Harvard University; Robert C. Winthrop, LL.D., president of the Massachusetts Historical Society.

General Committee.—Dr. John C. Dalton; Daniel Treadwell, formerly Rufus professor in Harvard University; Dr. Charles G. Putnam; Dr. Daniel Slade; Dr. Henry I. Bowditch, physician to Massachusetts General Hospital; Dr. Henry G. Clark, surgeon to Massachusetts General Hospital; Dr. Oliver

Wendell Holmes, professor of anatomy and physiology in Harvard University; Dr. J. Mason Warren, surgeon to the Massachusetts General Hospital; Dr. Robert W. Hooper, surgeon to the Massachusetts Charitable Eye and Ear Infirmary; Dr. William J. Dale; Dr. Henry J. Bigelow, surgeon to Massachusetts General Hospital; Dr. Charles E. Buckingham; Dr. George H. Lyman; Dr. Edward H. Clarke, professor of materia medica in Harvard University; Dr. Luther Parks, jr.; Dr. J. Baxter Upham.

Executive committee.—Dr. John Ware, late professor of theory and practice of medicine in Harvard University; Dr. David W. Cheever, Dr. J. N. Borland, Dr. C. D. Homans, Dr. Robert Ware, Dr. James C. White, Dr. Richard M. Hodges, Dr. Calvin G. Page.

Trustees.—Amos A. Lawrence, treasurer of Harvard University; John Lowell.

Secretary.—Francis Minot, physician to Massachusetts General Hospital.

Proceedings in behalf of the Morton testimonial.

At a meeting of medical gentlemen, held at the house of Dr. Jacob Bigelow, on the evening of January 26, 1861, for the purpose of bringing before the community the claims of Dr. W. T. G. Morton to a substantial recompense for the benefit which he has conferred on mankind by the discovery of the anæsthetic properties of sulphuric ether, Dr. John Homans was elected chairman, and Dr. Francis Minot, secretary, and the following resolutions were adopted:

1. *Resolved*, That this meeting view with great interest and satisfaction the movement inaugurated in Boston, New York, and Philadelphia,* in behalf of the Morton testimonial, and take this occasion to renew their expression of approval and sympathy.

2. *Resolved*, That the meeting commend the subscription proposed for the testimonial to the favor and support of the American people, and most cordially join in the commendation bestowed upon it by institutions and scientific men throughout the country.

3. *Resolved*, That in view of the present condition and objects to be attained by the testimonial, it is expedient to make an immediate effort to take up a general subscription in this community, which is the scene of Dr. Morton's labors and experiments, and the city where the discovery was made, and the testimonial had its origin.

4. *Resolved*, That a committee be appointed by the chair, from gentlemen out of the profession, to call on this community and solicit donations and subscriptions in behalf of the testimonial, with power to make additions to their number and substitutions, and to take such other action as they may deem expedient to promote this object.

5. *Resolved*, That a committee of medical men be appointed by the chair to confer with the committee on subscriptions as to the most efficient means of accomplishing the end in view.

6. *Resolved*, That it is expedient to appeal especially to those who have been relieved by etherization from intense pain, that they may have an opportunity to contribute according to their means.

On motion of Dr. Bowditch, the secretary was requested to notify the members of both committees of their appointment, and to desire them to meet together at such time and place as he may see expedient, to carry out the objects of this meeting.

The chair appointed the following committees:

Laymen.—Amos A. Lawrence, 17 Milk street; Charles Amory, 54 City Exchange; J. Ingersoll Bowditch, 54 State street; John Lowell, 42 Court street; John T. Stetson, 8 Milk street; William Appleton, jr., 24 Tremont

street; Moses Williams, jr., 105 State street; Daniel S. Curtis, 4 State street; John Joseph May, corner Broad and State streets; Martin Brimmer, 48 Beacon street; A. W. Spencer, 13 Congress street; Samuel Frothingham, jr., 59 Franklin street; Thomas J. Lee, 60 State street; Warren Sawyer, 7 Blackstone street; J. D. W. Joy, 17 Milk street; Prescott Bigelow, 1 Postoffice avenue; Joseph Burnett, 27 Central street; John H. Thorndike, 29 Edinboro' street; B. W. Taggard, 29 Cornhill; Gardner Brewer, Federal, corner Franklin street; Theodore Metcalf, 39 Tremont street; P. W. Chandler, 4 Court street; Thornton K. Lothrop, 42 Court street; Charles T. Randall, Devonshire, between Franklin and Summer streets; G. S. Hillard, Niles Block, School street; James T. Fields, corner School and Washington streets; William G. Weld, Edward T. Eastman.

Medical.—James Jackson, Jacob Bigelow, George Hayward, John Ware, John Homans, S. D. Townsend, John Jeffries, A. A. Gould, Henry I. Bowditch, O. W. Holmes, John H. Dix, Charles G. Putnam, J. Mason Warren, Henry J. Bigelow, Henry G. Clark.

JOHN HOMANS, M. D., *Chairman.*

FRANCIS MINOT, M. D., *Secretary.*

The following address is set forth by a sub-committee appointed at a meeting held at the house of Dr. J. Mason Warren, in pursuance of the foregoing object:

BOSTON, *March 4, 1861.*

SIR: We beg leave to address you in regard to the claims and services of Dr. W. T. G. Morton, as connected with the discovery of producing insensibility to pain by the anæsthetic effects of sulphuric ether. That this discovery has been an inestimable blessing to mankind, and that it is regarded as one of the most important applications of science to the uses of life that has been made, even in this age of improvement and progress, is beyond dispute.

While there is not an entire unanimity of opinion as to Dr. Morton's claims to the priority of the discovery, all who have investigated the subject agree that the pre-eminent merit of first establishing by experiment what was before only a surmise or a conjecture is his; and that without his courage, energy, and perseverance, the discovery would not have been put into practical operation. This is enough to make Dr. Morton one of the benefactors of his race. His discovery is now in use all over the civilized world; everywhere it is lightening the trying duties of the medical profession; soothing the pain of the suffering, and, what is hardly less valuable, taking away that apprehension of pain which, to the nervous and sensitive, is like suffering itself.

But Dr. Morton has experienced the common fate of inventors and discoverers. So far from being a gainer, he has been a loser to a very large amount, by the sacrifices and expenses incurred by him in introducing his discovery and vindicating his claims. It is not proposed to bestow upon Dr. Morton a pecuniary equivalent for his discovery; indeed, the worth of a discovery like his is not susceptible of a money value, though some approximation to it may be made by considering what sum mankind would be willing to give for such a blessing, supposing they had it not. But we think he is justly entitled, not merely to a return of all expenses incurred, but to some further expression of the grateful sense which his services to humanity have everywhere awakened. Thirty thousand pounds were given, in two successive grants, by the British Parliament to Dr. Jenner; and no one would deem a like sum an extravagant remuneration for the civilized world to bestow upon Dr. Morton.

The undersigned, a committee appointed at a meeting of gentlemen of the medical and other professions, held at the house of Dr. J. Mason Warren, on Tuesday, February 26, have the honor to address you on this subject, and to

solicit your aid in behalf of the object above set forth. Such contributions as you may see fit to make will be received by Amos A. Lawrence or John Lowell, who have consented to act as trustees of the fund which may be collected, or by any member of the joint committee on the Morton testimonial.

JOHN HOMANS,
JOHN WARE,
GEO. S. HILLARD,
CHAS. G. PUTNAM, } *Committee.*

FRANCIS MINOT, *Secretary.*

The undersigned having been appointed trustees of the fund to be raised as a testimonial to Dr. Morton for his discovery of etherization, and having accepted this trust, deem it their duty to state, for the information of those who may be asked to contribute, that it is not designed merely to present him with an honorable memento of the services which he has rendered to mankind, but to afford him relief from the embarrassments which his discovery has brought upon him.

It is necessary for us, therefore, to say that Dr. Morton has sacrificed all his property, and all the profits of his profession, in introducing his discovery, and in establishing his claim, and that he has seriously impaired his health; that he has failed to obtain compensation from the government for the use of ether by the army and navy, though a bill has been twice passed through one house of Congress for that purpose, and that he has no hope of any public compensation.

Under these circumstances, is it asking too much to bestow on one who is the author of the most beneficent discovery of this age, the means of an ample support for himself and his family?

Believing that all who have experienced the inestimable benefits of ether in its various forms in alleviating pain, or who have seen its effects upon others, will deem it a privilege to give some substantial proof to the discoverer, of their appreciation of its value; we forbear to give the details of his labors and his misfortunes.

AMOS A. LAWRENCE,
JOHN LOWELL, } *Trustees.*

BOSTON, March 4, 1861.

TESTIMONIAL OF THE MEDICAL PROFESSION OF PHILADELPHIA, NEW YORK, AND BOSTON.

Proceedings of the medical profession of Philadelphia, in behalf of W. T. G. Morton, M. D.

A meeting of the members of the medical profession who had indorsed the testimonial in behalf of Dr. W. T. G. Morton, was held at the hospital buildings, Spruce street, on Monday, March 26, 1860; when, on motion, Dr. Wilson Jewell was called to the chair, and Dr. T. H. Bache was chosen secretary.

The following preamble and resolutions were then offered, and having been read by the secretary, were unanimously adopted:

"Whereas, after innumerable trials, made during the last fourteen years, it has been established to the satisfaction of the world that the inhalation of ether may be safely employed for producing insensibility to pain:

"And whereas the attention of the medical profession, and through it of the public generally, was directed to this fact by Dr. Wm. T. G. Morton, of Boston, who first practically demonstrated that ether may be safely used by inhalation for annulling pain, in the Massachusetts General Hospital, where, on the 16th of October, 1846, a severe surgical operation was successfully performed by the

late Dr. John C. Warren, without pain to the patient, whilst under the influence ether administered by Dr. Morton:

"And whereas our national government, whilst admitting the claims of Dr. Morton, has failed to reward him for this great service to his country and humanity:

"*Resolved*, That, in the opinion of this meeting, the world is indebted to Dr. Morton for having practically proved the value and safety of ether as an anæsthetic agent, and that he is, therefore, entitled to the lasting gratitude of mankind.

"*Resolved*, That we cordially recommend to our fellow-citizens the national testimonial fund, lately commenced in Boston and New York in behalf of Dr. Morton, and that we will do all in our power to influence them to subscribe to the same.

Resolved, That, for the purpose of facilitating the subscriptions, a copy of these resolutions, duly authenticated by the officers of this meeting, be furnished to Messrs. Brown Brothers & Co., the receivers for this city, together with such other documents in explanation of the testimonial as may be approved by the officers of this meeting."

On motion the secretary was directed to transmit a copy of these resolutions to Dr. Morton.

On motion, adjourned.

WILSON JEWELL, *Chairman*.

T. H. BACHE, *Secretary*.

Testimonial of members of the medical profession of Philadelphia, in behalf of William T. G. Morton, M. D., to their fellow-citizens.

FEBRUARY 15, 1860.

The vast importance of the effect of the inhalation of ether, in preventing and suspending pain, has long ceased to be a matter of doubt among the members of the medical profession, and is too well known to the intelligent citizen of Philadelphia to need any further exposition. Etherization has been tested in countless instances, under a great variety of circumstances, during more than twelve years of constant employment by thousands of operators; and the result of this unsurpassed experience is decisive in confirmation of its safety and efficiency as a suppressor of physical suffering, and a powerful assistant of the healing art.

Believing, therefore, that anæsthetic inhalation is the most available and potent means of alleviating pain yet employed in the practice of surgery, and consequently, that it is one of the greatest gifts to humanity of the present age, we cannot but regard the original and successful introducer of this invaluable boon as entitled to the warm gratitude of mankind.

We believe the practical originator of anæsthetic inhalation to be Dr. William T. G. Morton, of Boston, Massachusetts, in whose behalf we are happy to bear witness in this testimonial.

We are convinced that he is the one who first resorted to ethereal inhalation for the purpose of producing insensibility to pain in a patient while undergoing a surgical operation, and that he is the one who first succeeded in effecting the result. He was, indisputably, the first to urge the anæsthetic properties of the vapor of ether upon the attention of the medical profession, and thus succeeded in establishing the practice of anæsthetic inhalation.

We therefore take great pleasure, and at the same time perform an act of duty, in recommending the claims of Dr. Morton to the favorable consideration of our fellow-citizens, and would cordially urge upon them the propriety of showing their estimate of his services by a substantial acknowledgment, such as

manifestly due from an enlightened community to one who has conferred on its members so inestimable a benefit.

We may refer to the annals of medicine in the Old World for many instances which analogous discoveries of less moment have been recognized and paid for by European governments, sometimes even before their true value had been ascertained. The length of time which has elapsed since the adoption of etherization has only the more firmly established its position by demonstrating its safety and developing its usefulness.

Our national government has admitted the justice and importance of Dr. Morton's claims in the introduction of ethereal anæsthesia, but has neglected to provide the proper reward.

Under these circumstances, the plan of individual contribution has been successfully resorted to by the citizens of Boston and New York as the best suited to the temper of our people, and the most likely to reach a satisfactory conclusion.

An opportunity is now offered to the citizens of Philadelphia to unite with their neighbors in the same work of benevolence and justice; and it is in this that we earnestly desire to interest them.

We sincerely hope that our townsmen, in whose liberality and sense of right we have great confidence, may join us in rendering the tribute to his merits and necessities which has elsewhere been accorded to him, and which we believe him to deserve.

University of Pennsylvania.—George B. Wood, M. D., professor of theory and practice of medicine; Hugh L. Hodge, M. D., professor of obstetrics and diseases of women and children; Joseph Carson, M. D., professor of materia medica and pharmacy; Robert E. Rogers, M. D., professor of chemistry; Joseph Leida, M. D., professor of anatomy.

Jefferson Medical College.—Joseph Pancoast, M. D., professor of general, descriptive, and surgical anatomy; Chas. D. Meigs, M. D., professor of obstetrics and diseases of women and children; Franklin Bache, M. D., professor of chemistry; Samuel D. Gross, M. D., professor of institutes and practice of surgery; T. D. Mitchell, M. D., professor of materia medica and general therapeutics; Samuel H. Dickson, M. D., professor of practice of medicine.

Pennsylvania College, medical department.—B. Howard Rand, M. D., professor of chemistry; Henry Hartshorne, M. D., professor of practice of medicine; Lewis D. Harlow, M. D., professor of obstetrics, &c.; William S. Halcy, M. D., professor of surgery; William Hembel Taggart, M. D., professor of materia medica; James Aitken Meigs, M. D., professor of institutes of medicine; William H. Gobrecht, M. D., professor of anatomy.

Pennsylvania Hospital.—William W. Gerhard, M. D., physician; James J. Evick, M. D., physician; John Forsyth Meigs, M. D., physician; Francis G. Smith, M. D., physician; Joseph Pancoast, M. D., surgeon; Edward Pearce, M. D., surgeon; Edward Hartshorne, M. D., surgeon.

Philadelphia Hospital.—S. D. Gross, M. D., surgeon; D. H. Agnew, M. D., surgeon; R. J. Lewis, M. D., surgeon; R. S. Kenderdine, M. D., surgeon; William Mayburry, M. D., physician; J. L. Laddow, M. D., physician; C. Endleton Tutt, M. D., physician; John Wiltbank, M. D., physician; R. A. Penrose, M. D., physician; Lewis D. Harlow, M. D., physician; William D. Broad, M. D., physician; J. Da Costa, M. D., physician.

Wills Hospital.—S. Littell, M. D., surgeon; Addinell Hewson, M. D., surgeon; T. G. Morton, M. D., surgeon; William Hunt, M. D., surgeon; S. L. Hollingsworth, M. D., physician; John J. Reese, M. D., physician; James J. Evick, M. D., physician; A. Douglass Hall, physician.

Episcopal Hospital of Philadelphia.—J. C. Morris, M. D., physician; H. Hartshorne, M. D., physician; J. Da Costa, M. D., physician; Wm. Mayburry.

M. D., physician; William Hunt, M. D., surgeon; H. E. Drayton, M. D., surgeon; R. S. Kenderdine, M. D., surgeon.

Charity Hospital of Philadelphia.—P. B. Goddard, M. D., surgery; William H. Pancoast, M. D., surgery; Z. Ring Jones, M. D., eye, ear, and urinary organs; H. St. Clair Ash, M. D., diseases of children; Burroughs Price, M. D., diseases of digestive organs, brain, and nervous system; A. W. Griffiths, M. D., obstetrics; Alexander C. Hart, M. D., diseases of women; W. E. Weatherly, M. D., diseases of respiratory organs; S. Updegrove, M. D., diseases of the skin; J. L. Ludlow, M. D., fevers and general diseases.

St. Joseph's Hospital of Philadelphia.—William V. Keating, M. D., physician; S. Wier Mitchell, M. D., physician; William Keller, M. D., physician; A. Bourmonville, M. D., obstetrician; J. H. B. McClellan, M. D., surgeon; Wm. Byrd Page, M. D., surgeon; John H. Brinton, M. D., surgeon; Joseph Leidy, M. D., pathologist.

Children's Hospital of Philadelphia.—Wm. Pepper, M. D., consulting physician; John F. Meigs, M. D., consulting physician; F. W. Lewis, M. D., attending physician; Wm. R. Dunton, M. D., attending physician; R. A. F. Penrose, M. D., attending physician; T. H. Bache, M. D., attending physician.

Pennsylvania Hospital for the Insane.—Thomas S. Kirkbride, M. D., physician in chief; Edward A. Smith, M. D., resident physician.

City Hospital of Philadelphia.—John Bell, M. D.

Moyamensing Prison.—Henry Yale Smith, M. D.

Board of Health.—P. B. Goddard, M. D., president.

Howard Hospital.—S. D. Gross, M. D., D. D. Clark, M. D., general and special surgery; J. A. Meigs, M. D., diseases of the chest; J. Klapp, M. D., diseases of digestive organs; O. A. Judson, M. D., diseases of the skin; G. B. Morehouse, M. D., diseases of brain and nervous system; W. Darrach, M. D., fevers; E. McClellan, M. D., diseases of females; Charles Neff, M. D., diseases of the urinary organs.

College of Physicians of Philadelphia.—George B. Wood, M. D., president; Franklin Bache, M. D., vice-president; Edward Hartshorne, M. D., secretary; J. Rodman Paul, M. D., treasurer; John Bell, M. D., Hugh L. Hodge, M. D., Charles D. Meigs, M. D., R. La Roche, M. D., Benjamin Hornor Coates, M. D., Lewis P. Gebhard, M. D., William Darrach, M. D., Theophilus E. Beesley, M. D., William W. Gerhard, M. D., Joseph Pancoast, M. D., D. Francis Condit, M. D., Squire Littell, M. D., Anthony Bournonville, M. D., Joseph Carson, M. D., Thomas S. Kirkbride, M. D., Francis West, M. D., Edward Peace, M. D., William Pepper, M. D., David C. Skerrett, M. D., John D. Griscorn, M. D., Paul Beck Goddard, M. D., Alfred Stille, M. D., John J. Reese, M. D., John Forsyth Meigs, M. D., Lewis Rodman, M. D., Francis G. Smith, M. D., Washington L. Atlee, M. D., John Neill, M. D., Samuel D. Gross, M. D., Anthon E. Stocker, M. D., Gouverneur Emerson, M. D., James E. Rhoads, M. D., T. Stewardson, M. D., E. Wallace, M. D., Joseph Klapp, M. D., Samuel L. Hollingsworth, M. D., John L. Ludlow, M. D., John H. B. McClellan, M. D., William V. Keating, M. D., D. Paul Lajus, M. D., Thomas S. Reed, M. D., Richard H. Townsend, M. D., Isaac Remington, M. D., John B. Biddle, M. D., Henry E. Drayton, M. D., Caspar Morris, M. D., James J. Leveck, M. D., Joseph Leidy, M. D., Wilson Jewell, M. D., Henry Hartshorne, M. D., William Keller, M. D., William Mayburry, M. D., Thomas Hewson Bache, M. D., James V. Emlen, M. D., Joseph Hopkinson, M. D., William H. Hooper, M. D., Addine Hewson, M. D., David Gilbert, M. D., B. Howard Rand, M. D., William Hunt, M. D., R. A. F. Penrose, M. D., William H. Gobrecht, M. D., William I. Stroud, M. D., Nathan L. Hatfield, M. D., S. Wier Mitchell, M. D., John H. Brinton, M. D., Francis W. Lewis, M. D., Samuel Lewis, M. D., T. Dillard, M. D., G. H. Robinett, M. D., S. C. Brinckle, M. D.

Philadelphia County Medical Society.—Isaac Remington, M. D., president

David Gilbert, M. D., Jos. Carson, M. D., vice-presidents; W. B. Atkinson, M. D., secretary; S. D. Gross, M. D., D. Francis Condie, M. D., Wilson Jewell, M. D., Joseph Pancoast, M. D., Charles D. Meigs, M. D., R. E. Rogers, M. D., Edward Pease, M. D., John Bell, M. D., S. Littell, M. D., W. W. Gerhard, M. D., D. Paul Lajus, M. D., Addinell Hewson, M. D., J. H. B. McClellan, M. D., A. Gebinger, M. D., D. D. Clark, M. D., E. Ward, M. D., S. Weir Mitchell, M. D., J. Cheston Morris, M. D., R. H. Townsend, M. D., T. M. Drysdale, M. D., William D. Stroud, M. D., Anthony Bournonville, M. D., W. K. Gilbert, M. D., Theophilus E. Beesley, M. D., R. S. Kenderdine, M. D., C. F. Wittig, M. D., J. H. Haskell, M. D., Robert Q. Shelmerdine, M. D., Robert C. Shelmerdine, M. D., J. Henry Smaltz, M. D., Levi Curtis, M. D., Samuel B. Wylie Mitchell, M. D., Edward Maris, M. D., Augustus C. Bournonville, M. D., J. G. Hunt, M. D., James V. Emlen, M. D., George B. Wood, M. D., Franklin Bache, M. D., N. L. Hatfield, M. D., Alfred Stille, M. D., William V. Keating, M. D., Hugh L. Hodge, M. D., Joseph Leidy, M. D., Henry Hartshorne, M. D., William Pepper, M. D., Paul B. Godard, M. D., B. H. Coates, M. D., M. M. Lewis, M. D., Francis West, M. D., Lewis D. Harlow, M. D., Lewis Rodman, M. D., James Aitken Meigs, M. D., John Rodman Paul, M. D., William Hunt, M. D., J. Hayes Agnew, M. D., R. J. Levis, M. D., E. B. Shapleigh, M. D., John Knorr, M. D., William Harris, M. D., John Wiltbank, M. D., W. H. Gebrecht, M. D., Samuel Jackson, M. D., A. Owen Stille, M. D., William D. Hoyt, M. D., George J. Ziegler, M. D., Washington L. Atlee, M. D., William Curran, M. D., W. Darrach, M. D., James J. Levick, M. D., J. Forsyth Meigs, M. D., William H. Hooper, M. D., Thomas Hewson Bache, M. D., John D. Griscom, M. D., E. Boylston Jackson, M. D., A. W. Griffiths, M. D., Joseph Klapp, M. D., Owen Oler, M. D., Philip De Young, M. D., J. F. Bird, M. D., R. H. Lee, M. D., Colin Aitott, M. D., W. Keller, M. D., H. Evans, M. D., Preston W. Russell, M. D., John S. Rohrer, M. D., G. Emerson, M. D., Charles Neff, M. D., D. C. Skerrett, M. D., William Notson, M. D., John Wm. Jones, M. D., F. Scoffin, M. D., A. S. McMurray, M. D., W. H. Gillingham, M. D., Henry Yale Smith, M. D., T. Stanton Crowley, M. D., A. H. Fish, M. D., B. H. Deacon, M. D., William J. Fleming, M. D., E. McClellan, M. D., L. P. Gebhard, M. D., Wm. F. Patterson, M. D., Wm. Clendaniel, M. D., Andrew Cheeseman, M. D., James N. Patterson, M. D., Joseph Heritage, M. D., J. Hershey, M. D., Wm. Byrd Page, M. D., O. J. Wister, M. D., W. N. Johnson, M. D., E. F. Leake, M. D., A. L. Kennedy, M. D., J. M. Corde, M. D., Abraham Helffenstein, M. D., R. W. Richie, M. D., A. Fricke, M. D., Wm. Ashmead, M. D., John F. Lamb, M. D., H. D. Benner, M. D., W. S. Forbes, M. D., Winthrop Sergeant, M. D., S. C. Huston, M. D., J. Hughes, M. D., E. Scholfield, M. D.

Northern Medical Association.—Joseph R. Bryan, M. D., president; L. P. Gebhard, M. D., vice-president; Wm. B. Atkinson, M. D., secretary; William Mayburry, M. D., corresponding secretary; J. Henry Smaltz, M. D., treasurer; N. L. Hatfield, M. D., R. H. Townsend, M. D., J. J. Woodward, M. D., A. M. Slocum, M. D., John Rhein, M. D., A. C. Bournonville, M. D., J. M. Eagleton, M. D., L. Curtis, M. D., Owen Oler, M. D., T. W. Craig, M. D., Theo. A. Demme, M. D., J. S. Hill, M. D., S. N. Troth, M. D., L. S. Somers, M. D., D. Gilbert, M. D., R. S. Kenderdine, M. D., R. Q. Shelmerdine, M. D., M. M. Lewis, M. D., L. D. Harlow, M. D., R. J. Levis, M. D., W. L. Atlee, M. D., C. Wittig, M. D., S. Updegrave, M. D., B. Price, M. D.

Medical Society of the State of Pennsylvania.—D. F. Condie, M. D., president.

Philadelphia Medical Society.—R. La Roche, M. D., president; John Neill, M. D., vice-president; A. E. Stocker, M. D., secretary.

Pathological Society of Philadelphia.—A. Stille, M. D., president; R. La Roche, M. D., E. Hartshorne, M. D., vice-presidents; J. Da Costa, M. D., secretary; John K. Kane, assistant secretary.

Biological department of the Academy of Natural Sciences of Philadelphia.—Joseph Leidy, M. D., president; W. F. Atlee, M. D., recorder.

Profession at large.—C. P. Turner, M. D., O. A. Judson, M. D., L. D. Bodler, M. D., John Gegan, M. D., Samuel Tucker, M. D., Andrew J. Smiley, M. D., C. S. Wurts, M. D., James W. Bacon, M. D., J. R. McClurg, M. D., E. Shippen, M. D., W. S. Shippen, M. D., C. S. Bishop, M. D., Alexander C. Hart, M. D., G. J. Chamberlain, M. D., James Darrach, M. D., A. C. Deakyne, M. D., Morris J. Asch, M. D., W. N. Handy, M. D., N. C. Reid, M. D., William Graham, M. D., John H. Brinton, M. D., Robert Bolling, M. D., William M. Breed, M. D., E. L. Carter, M. D., Edward A. Spooner, M. D., George B. Morehouse, M. D., Samuel H. Ashton, M. D., Jas. D. Mundy, M. D., C. P. La Roche, M. D., W. Moss, M. D., J. K. T. Van Pelt, M. D., J. M. Boissnot, M. D., J. C. Cooper, M. D., S. H. Horner, M. D., David Burpee, M. D., A. Pennebaker, M. D., E. S. Sharp, M. D., George Spackman, M. D., Robert Foster, M. D., Edwin Fussell, M. D., William Gregg, M. D., Samuel P. Brown, M. D.

Proceedings at a meeting of the medical profession of New York.

On the 24th of June, a meeting of medical gentlemen, interested in raising a national testimonial for the benefit of the discoverer of anæsthesia, was held at the residence of Dr. Willard Parker.

The hour for organization having arrived, Dr. Parker addressed the meeting, explained its objects, and proposed for president Dr. Joseph M. Smith, which nomination having been seconded, was voted upon and carried. Dr. Gurdon Buck was then elected corresponding secretary, and Drs. Bibbins and Thomas recording secretaries.

The meeting being now duly organized, the business of the evening was called for, and proceeded in this wise:

1. Dr. John Watson read a list of the names of some of the most prominent, benevolent, and wealthy of the citizens of New York, and proposed that each gentleman present should charge himself with visiting such of them as he had most influence with, and raising as large subscriptions as possible to head the list. This was acted upon; a list of one hundred names was read, and the duty of canvassing them assumed by various gentlemen composing the meeting.

2. Dr. Buck moved that a committee of medical men be appointed to confer with gentlemen out of the profession as to the most efficient means for accomplishing the end in view. This was seconded by Dr. Parker and carried. On the committee the president then appointed Drs. John W. Francis, Willard Parker, John Watson, Valentine Mott, James Minor, J. Marion Sims, James R. Wood, Gurdon Buck, and Joseph M. Smith; and, upon motion of Dr. Sayre, the president was added to it. This committee, it was agreed, should meet at the house of Dr. Parker at an early date.

3. It was then moved by Dr. Parker that a committee of one selected from the medical board of each public charity of the city and its vicinity should be appointed to wait upon the boards directing the various institutions, and solicit donations in behalf of the object which has called us together this evening. This motion was seconded by Dr. Watson and carried. The following appointments were then made by the chair: Dr. Gurdon Buck, New York Hospital; Dr. James R. Wood, Bellevue Hospital; Dr. J. M. Carnochan, Emigrants' Hospital; Dr. William H. Van Buren, St. Vincent's Hospital; Dr. Benjamin Ogden, St. Luke's Hospital; Dr. J. Moses, Jews' Hospital; Dr. J. M. Sims, Women's Hospital; Dr. G. L. Elliott, Child's Hospital; Dr. Elisha Harris, Quarantine Hospital; Dr. T. F. Cock, New York Lying-in Asylum; Dr. Hutchinson, Brooklyn City Hospital; Dr. Ayres, Long Island College Hospital; Dr. Fitch, Colored Home Hospital; Dr. Dubois, New York Eye Infirmary; Dr. Garrish, New York Ophthalmic Hospital.

4. It was moved by Dr. Watson that the minutes of this meeting be transmitted to Dr. William T. G. Morton by the secretary, which was carried. No further business appearing, the meeting then adjourned.

JOSEPH M. SMITH, M. D., *President*.

GURDON BUCK, M. D., *Corresponding Secretary*.

T. GAILLARD THOMAS, M. D., *Recording Secretary*.

The New York Appeal.

The medical profession have from the earliest ages felt the need of some safe and efficient agent for annulling pain.

The ordinary anodynes long in use have never supplied this deficiency, and the various new agents which, within the past sixty or eighty years, have been substituted for these, have, until recently, proved either too dangerous or too unreliable to be employed in general practice.

Wine and strong alcoholic drinks, given in such quantity as to induce intoxication, were occasionally employed, even before the commencement of the present century, for rendering persons insensible to the pain of surgical operations. With the same end in view, some surgeons, addressing the intellect, were in the habit of exciting sudden fear, alarm, or astonishment, to divert the attention of their patients. Others, again, resorted to the uncertain and inexplicable influence of mesmerism. Still more recently, the nitrous oxide gas, administered by inhalation, has, as originally suggested by Sir Humphry Davy, been employed for producing temporary loss of consciousness. But this, too, after a fair trial, has failed, and the hopes founded upon it have proved nugatory and delusive. So that, up to this point, the want of a reliable agent for rendering the human body insensible to pain—a want so long felt, and to obviate which so many fruitless efforts had been made—was still to be supplied. That want, however, has since been fully met.

The first great triumph of placing in the hands of the profession an agent capable of rendering the patient safely, and, at will, utterly insensible to the stroke of the surgeon's knife, was in detecting and establishing by experiment the anæsthetic powers of sulphuric ether. For this discovery the world is indebted to Dr. William T. G. Morton, of Boston.

Whatever may have been the steps preliminary to this remarkable discovery, Dr. Morton's claim to it is established beyond all controversy, and his merit in this respect, with those who have taken the trouble to inform themselves on the subject, can be no longer a question of dispute.

Nor can the importance of his early investigations and experiments, under the guidance of Providence, in reference to the properties and uses of ether, be at the present day too highly estimated. The introduction of this agent as an æsthetic, and of the various other agents of the same class—as chloroform, ethylene, and the like—to which this directly led, has done more for the mitigation of human suffering than any other discovery, with the exception, perhaps, of vaccination, for which the world is indebted to medical science in either ancient or modern times.

The benefit derived from these newly-discovered agents is not confined to the milder procedures of operative surgery. They are now in hourly requisition in every quarter of the civilized world for suspending all sense of suffering during the severest throes of childbirth, for arresting convulsions, for relaxing spasms, for suspending volition and overcoming muscular resistance during the reduction of fractures and dislocations, for allaying restlessness, wakefulness, and morbid excitability; even for assuaging the pangs of approaching dissolu-

tion, not to speak of the almost innumerable minor uses to which they are applied, as well in the investigation as in the treatment of disease.

In view of these advantages from the use of anæsthetics, we feel that Dr. Morton, the first to demonstrate their safety and efficiency, and to establish them in general practice, has conferred a boon upon humanity as imperishable as it is important, and one of such a character as to entitle him to rank among the benefactors of mankind.

As members of the medical profession in the city of New York, and as physicians and surgeons to the various hospitals and infirmaries in this city and its vicinity, we therefore rejoice to learn that a movement has been commenced by our professional brethren and other gentlemen of Boston, to establish a national testimonial, by voluntary subscriptions, for the benefit of Dr. Morton. In this movement, after full deliberation and consultation among ourselves, we are ready to participate, in accordance with the plan of those who originated it, which plan is set forth by the gentlemen of Boston in the following terms:

We propose that a national subscription be instituted, the avails of which shall be paid into the hands of Thomas B. Curtis and Charles H. Mills, esquires, as trustees, to be held, appropriated, and invested upon such trusts, and for such uses, for the benefit of Dr. Morton, as the trustees may determine.

Under governments more arbitrary and restrictive than our own, but more capable of meeting the claims of science, the awards of merit are not usually left, as with us, to the bounty of private individuals. Discoveries and improvements of infinitely less importance to science or humanity than that for which we are indebted to Dr. Morton are at the courts of Europe promptly met by national honors and emoluments.

In our own country, it is true, the national government, after carefully investigating Dr. Morton's claims, has acknowledged the benefit he has conferred upon it, but has nevertheless failed, as yet, to supply the recompense.

With these remarks, we have the honor of recommending Dr. Morton's claim for remuneration to the consideration of our fellow-citizens, and of soliciting their subscriptions in behalf of the fund which it is proposed to raise for his benefit.

What the government in this respect has failed to do, it is to be hoped, for the credit of the American name, and from the noble individual example already set, that the discerning and liberal people of the United States will not leave entirely unaccomplished.

PHYSICIANS AND SURGEONS.

New York Hospital and Bloomingdale Asylum.—Thos. Cock, M. D., consulting physician; Jos. M. Smith, M. D., attending physician; John H. Griscor, M. D., attending physician; Henry D. Bulkley, M. D., attending physician; Thos. F. Cock, M. D., attending physician; Valentine Mott, M. D., consulting surgeon; Alexander H. Stevens, M. D., consulting surgeon; Richard K. Hoffman, M. D., consulting surgeon; Alfred C. Post, M. D., consulting surgeon; Gurdon Buck, M. D., attending surgeon; John Watson, M. D., attending surgeon; Thad. M. Halsted, M. D., attending surgeon; Thos. M. Markoe, M. D., attending surgeon; Wm. H. Van Buren, M. D., attending surgeon; Willa Parker, M. D., attending surgeon.

Bellevue Hospital, and of the other institutions under the charge of the board of governors of the almshouse.—John W. Francis, M. D., consulting physician; Isaac Wood, M. D., consulting physician; R. W. McCready, M. D., attending physician; John T. Metcalfe, M. D., attending physician; Isaac E. Taylor, M. D., attending physician; B. Fordyce Barker, M. D., attending physician; Geo. T. Elliott, M. D., attending physician; Valentine Mott, M. D., consulting surgeon; Alex. H. Stevens, M. D., consulting surgeon; Jas. R. Wood, M. D.,

attending surgeon; Chas. D. Smith, M. D., attending surgeon; Lewis A. Layre, M. D., attending surgeon; J. J. Crane, M. D., attending surgeon; W. Parker, M. D., attending surgeon; Stephen Smith, M. D., attending surgeon.

Nursery Hospital, Randall's Island.—Henry N. Whittlesey, M. D., resident physician.

Quarantine Hospital, Staten Island.—R. N. Thompson, M. D., health officer, port of New York; Theo. Watson, M. D., assistant physician, Quarantine Hospital.

Blackwell's Island Hospitals, (Penitentiary Hospital, Smallpox Hospital, and Almshouse.)—William H. Sanger, M. D., resident physician.

New York Lunatic Asylum.—M. H. Ranney, resident physician.

State Emigrant Asylum.—J. M. Carnochan, M. D., surgeon-in-chief; T. O. Selden, M. D., surgeon; H. Guleke, M. D., surgeon; Henry B. Fay, M. D., physician-in-chief; Francis Simrock, M. D., physician; G. Ford, M. D., physician.

St. Vincent's Hospital.—Thos. E. Burtzell, M. D., attending physician; James O'Rourke, M. D., attending physician; Wm. H. Van Buren, M. D., attending surgeon; Alex. B. Mott, M. D., attending surgeon; Thos. C. Finnell, M. D., attending surgeon.

St. Luke's Hospital.—D. E. Eiginbrodt, resident physician.

Jeets' Hospital.—V. Mott, M. D., consulting surgeon; W. Parker, M. D., consulting surgeon; T. M. Markoe, M. D., attending surgeon; Alex. B. Mott, M. D., attending surgeon; J. Moses, M. D., attending surgeon; C. R. Gilman, M. D., attending physician; W. H. Maxwell, M. D., attending physician.

New York Eye Infirmary.—A. Dubois, M. D., surgeon; Gurdon Buck, M. D., surgeon; T. M. Halsted, M. D., surgeon; C. R. Agnew, M. D., surgeon; F. J. Bumstead, M. D., assistant surgeon; J. H. Hinton, M. D., assistant surgeon.

New York Ophthalmic Hospital.—Mark Stephenson, M. D., surgeon; John P. Garrieh, M. D., surgeon.

Colored Home Hospital.—G. A. Sabine, M. D., consulting surgeon; W. Parker, M. D., consulting surgeon; J. S. Thebaud, M. D., consulting surgeon; F. D. Fitch, resident physician.

Women's Hospital.—J. Marion Sims, M. D., surgeon.

New York Lying-in Asylum.—T. F. Cock, M. D., consulting physician; J. F. Metcalfe, M. D., consulting physician; G. T. Elliott, M. D., consulting physician.

Nursery and Child's Hospital.—G. T. Elliott, M. D., attending physician; H. C. Cox, M. D., attending physician; Geo. A. Peters, M. D., attending physician; F. U. Johnston, M. D., attending physician.

Demilt Dispensary.—Jno. O. Brouson, M. D., house physician; Wm. B. Bibbins, M. D., visiting physician; D. L. Conant, M. D., attending surgeon; T. J. Thomas, M. D., attending physician; Gouv. M. Smith, M. D., attending physician; I. Cummings, M. D., assistant visiting physician; W. R. Donaghe, M. D., attending surgeon; Elisha Harris, M. D., attending physician; Jno. A. Bartholf, M. D., attending physician.

New York Academy of Medicine.—J. F. Batchelder, M. D., president; John Watson, M. D., vice-president; W. H. Van Buren, M. D., vice-president; S. Jonant Foster, M. D., vice-president; C. E. Isaacs, M. D., vice-president; C. T. Heywood, M. D., recording secretary; S. T. Hubbard, M. D., corr. corresponding secretary; Jas. O. Pond, M. D., treasurer; Samuel Rotten, M. D., librarian; W. W. Blakeman, M. D., trustee; Ed. L. Beadle, M. D., trustee; Benj. Ogden, M. D., trustee; F. U. Johnston, M. D., assistant secretary; B. F. Barker, M. D., resident fellow; Gurdon Buck, M. D., resident fellow; H. D. Bulkeley, M. D., resident fellow; F. J. Bumstead, M. D., resident fellow; Thos. Jock, M. D., resident fellow; Thos. F. Cock, M. D., resident fellow; J. J.

Crane, M. D., resident fellow; Geo. T. Elliott, M. D., resident fellow; T. C. Finnell, M. D., resident fellow; J. W. Francis, M. D., resident fellow; J. P. Garrish, M. D., resident fellow; C. R. Gilman, M. D., resident fellow; J. H. Griscom, M. D., resident fellow; T. M. Halsted, M. D., resident fellow; E. Harris, M. D., resident fellow; J. H. Hinton, M. D., resident fellow; Isaac Wood, M. D., resident fellow; J. R. Wood, M. D., resident fellow; Jas. Anderson, M. D., resident fellow; E. Acosta, M. D., resident fellow; E. H. Davis, M. D., resident fellow; A. K. Gardner, M. D., resident fellow; Ed. Delafield, M. D., resident fellow; Joel Foster, M. D., resident fellow; J. C. Beales, M. D., resident fellow; R. W. Barry, M. D., resident fellow; H. W. Brown, M. D., resident fellow; J. C. Forrester, M. D., resident fellow; H. S. Downs, M. D., resident fellow; F. S. Edwards, M. D., resident fellow; F. Elliott, M. D., resident fellow; R. Pennell, M. D., resident fellow; T. W. Richards, M. D., resident fellow; A. Underhill, M. D., resident fellow; Jos. Wooster, M. D., resident fellow; J. W. S. Gouley, M. D., resident fellow; E. H. Janes, M. D., resident fellow; C. Henschell, M. D., resident fellow; A. Gescheidt, M. D., resident fellow; A. N. Gunn, M. D., resident fellow; Wm. H. Maxwell, M. D., resident fellow; E. Hall, M. D., resident fellow; Jared Linsley, M. D., resident fellow; John McClelland, M. D., resident fellow; E. Lee Jones, M. D., resident fellow; B. W. McCready, M. D., resident fellow; W. Parker, M. D., resident fellow; G. A. Sabine, M. D., resident fellow; L. A. Sayer, M. D., resident fellow; J. M. Sims, M. D., resident fellow; C. D. Smith, M. D., resident fellow; M. Smith, M. D., resident fellow; Mark Stephenson, M. D., resident fellow; J. E. Taylor, M. D., resident fellow; T. G. Thomas, M. D., resident fellow; W. H. Van Buren, M. D., resident fellow; Wm. Minor, M. D., resident fellow; Jos. Martin, M. D., resident fellow; J. W. Ranney, M. D., resident fellow; John Priestley, M. D., resident fellow; Alex. H. Stevens, M. D., resident fellow; W. C. Livingston, M. D., resident fellow; Stephen Smith, M. D., resident fellow; Geo. Lewis, M. D., resident fellow; Jas. D. Fitch, M. D., resident fellow; Charles A. Budd, M. D., resident fellow; N. C. Husted, M. D., resident fellow; Thos. W. Horsfield, M. D., resident fellow.

New York Medical College.—Horace Green, M. D., president of faculty; E. H. Davis, M. D., professor of materia medica; B. F. Barker, M. D., professor of obstetrics; R. Ogden Doremus, M. D., professor of chemistry; J. M. Cannon, M. D., professor of surgery; H. G. Cox, M. D., professor of theory and practice; E. R. Peaselee, M. D., professor of physiology; Chas. A. Budd, M. D., lecturer on obstetrics.

New York Pathological Society.—E. R. Peaselee, M. D., president; E. Harris, M. D., vice-president; E. Lee Jones, M. D., secretary; W. B. Bibbins, M. D., treasurer; T. C. Finnell, M. D., curator.

Brooklyn City Hospital.—James Crane, M. D., attending physician; H. S. Smith, M. D., attending physician; George Cochran, M. D., attending physician; C. E. Isaacs, M. D., attending surgeon; Daniel E. Kissam, attending surgeon; J. C. Hutchinson, attending surgeon; Jos. M. Minor, M. D., attending surgeon.

College of Physicians and Surgeons.—Thomas Cock, M. D., president; Ed. Delafield, M. D., emeritus professor of obstetrics; Willard Parker, M. D., professor of surgery; Joseph M. Smith, M. D., professor of materia medica; C. R. Gilman, M. D., professor of obstetrics.

University Medical College.—Wm. H. Van Buren, M. D., professor of anatomy; Alfred C. Post, M. D., professor of surgery; J. T. Metcalfe, M. D., professor of practice.

The Boston Appeal.

TO THE PUBLIC: The power of etheric vapors to produce a safe insensibility to pain during surgical operations, and on other occasions of great physical suffering, is one of the most beneficent discoveries that has been conferred upon the human race. It is generally conceded that Dr. W. T. G. Morton, of Boston, was instrumental in presenting this fact to the world. Nearly the whole of the medical profession [refer to page 62.] of this city, in the midst of whom the discovery was made, together with other bodies of competent persons, who have investigated its origin, have, after careful scrutiny, concurred in assigning this merit to Dr. Morton, and public opinion has long since confirmed their verdict.

It is not necessary to enter in detail into the circumstances which have prevented Dr. Morton from receiving any pecuniary benefit from this discovery.

The fact is certain, that Dr. Morton has been an instrument, under Divine Providence, of introducing to the world one of the most remarkable discoveries of this or any other age, and that he has received no reward for it but the consciousness of having done so.

We are sure that we interpret the feeling of thousands when we say that a substantial national memorial should be presented to Dr. Morton.

How often has the poor sufferer risen from beneath the surgeon's knife, with nerves untouched by the slightest sensation of the torture that would otherwise have been his! How often has the mother passed in unconscious slumber, through "the perils of childbirth," to wake to her new happiness, without one memory of its agonies, and breathed, with the prayer of thanksgiving to God, a thought of him—to her, perhaps, the unknown discoverer—whose happy conception, perseverance, and courage, first established the astonishing fact that the human frame may suffer all the conditions, and not one of the sensations of pain! What has already occurred throughout the whole world since this discovery was made; in hospitals, in private chambers of the sick, on fields of battle, on the ocean, and on the land—wherever humanity undergoes the "ills that flesh is heir to"—is to occur through countless ages, while the race is left upon earth! And yet, year rolls after year, and the spontaneous gratitude that is felt and uttered whenever and wherever this great discovery is used or contemplated, finds no permanent voice, because no efforts are made to concentrate and direct it to its object.

We propose that such efforts be now made. We think that the people of the United States, acting individually, should do what their government has neglected, or been unable to do. National testimonials, established by the voluntary contributions of individuals, have been adopted in all countries, to mark the public sense of services to the human family, especially when such services have reflected honor and distinction upon the country where they have been performed.

We propose that a national subscription be instituted, the avails of which shall be paid into the hands of Amos A. Lawrence and John Lowell, esquires, as trustees—to be held, appropriated, and invested upon such trusts, and for such uses, for the benefit of Dr. Morton, as the trustees may determine.

James Jackson, M. D., Jacob Bigelow, M. D., S. D. Townsend, M. D., John Jeffries, M. D., Edward Reynolds, M. D., John Homans, M. D., M. S. Perry, M. D., O. W. Holmes, M. D., John Ware, M. D., George Hayward, M. D., J. Mason Warren, M. D., Henry J. Bigelow, M. D., Charles G. Putnam, M. D., Richard H. Dana, jr., esq., Alexander H. Vinton, D. D., S. K. Lothrop, D. D., John B. Fitzpatrick, bishop of Boston, William H. Prescott, historian, N. Adams, D. D., Hon. Rufus Choate, Charles P. Curtis, esq., F. C. Loring, esq.,

Hon. G. S. Hillard, William Dehon, esq., Benj. Peirce, professor Harvard University, F. D. Huntington, D. D., Henry W. Longfellow, professor Harvard University, Jared Sparks, president Harvard University, R. B. Forbes, esq., P. W. Chandler, esq., Alex. H. Rice, mayor of Boston, Hon. Robert Winthrop.

MEMORIAL OF THE MEMBERS OF THE MASSACHUSETTS MEDICAL SOCIETY.

To the honorable the Senate and House of Representatives of the United States in Congress assembled:

The undersigned hereby testify to your honorable body that, in their opinion Dr. William T. G. Morton first proved to the world that ether would produce insensibility to the pain of surgical operations, and that it could be used with safety. In their opinion, his fellow-men owe a debt to him for this knowledge. Wherefore they respectfully ask a recognition by Congress of his services to his country and mankind:

John C. Warren, M. D., senior surgeon Massachusetts General Hospital, and late president American Medical Society, and emeritus professor of anatomy Harvard University; George Hayward, M. D., president Massachusetts Medical Society and surgeon Massachusetts General Hospital; J. Mason Warren, M. D., surgeon Massachusetts General Hospital; S. D. Townsend, M. D., surgeon Massachusetts General Hospital; S. Parkman, M. D., surgeon Massachusetts General Hospital; Henry G. Bigelow, M. D., surgeon Massachusetts General Hospital, and professor of surgery Harvard University; Henry G. Clark, M. D., surgeon Massachusetts General Hospital and city physician; Jacob Bigelow, M. D., professor materia medica Harvard University, and president of the American Academy of Arts and Sciences, and physician to Massachusetts General Hospital; Oliver W. Holmes, M. D., professor of anatomy, Harvard University; Henry I. Bowditch, M. D., physician Massachusetts General Hospital; D. Humphreys Storer, M. D., physician Massachusetts General Hospital; M. S. Perry, M. D., physician Massachusetts General Hospital; James Jackson, M. D., George C. Shattuck, M. D., John Jeffries, M. D., Edward Reynolds, M. D., consulting physicians and surgeons Massachusetts General Hospital; Edward Reynolds, M. D., W. Hooper, M. D., George A. Bethune, M. D., Massachusetts Charitable Eye and Ear Infirmary; John L. Fox, M. D., surgeon United States Navy, Chelsea Naval Hospital; Walter Channing, John Homans, president Suffolk District Medical Society; Z. B. Adams, John C. Hayden, John W. Ephraim Buck, George Bartlett, Jonas H. Lane, Anson Hooker, Henry Dyar, Augustus A. Gould, Charles Gordon, Joseph S. Jones, Samuel Kneeland, T. Fletcher Oakes, George Hubbard, Charles W. Moore, Richard H. Salt, Fytche Edward Oliver, William J. Dale, William Edward Coale, James Stone, B. W. Newell, Francis A. Willard, William Hawes, Charles Mifflin, Wippasne, Abraham A. Watson, Aaron P. Richardson, Henry A. Ward, William Bowen Morris, James B. Gregorson, William W. Morland, M. C. Gree, Horace Stacey, Franklin F. Patch, Samuel L. Abbott, John H. Dix, James Ayer, Joseph J. Fides, P. Wilbrand, Ezra Bartlett, S. F. Parcher, James Hyndman, Henry S. Lee, E. D. Cleveland, John Stevens, Ira W. Tobie, J. Everett Herri, N. C. Stevens, Enock C. Rolfe, Henry Willard, A. Alexander, D. McGowan, Thomas R. Owens, Luther Clark, Charles T. Hoffenvane, Samuel Morrill, S. Durkee, George Stevens Jones, Jesse Chickering, J. A. Tarbell, George Lyman, Henry W. Williams, J. Randolph Lincoln, George Derby, Warren Whitney, Francis Minot, D. D. Slade, W. E. Townsend, John B. Alley, George H. Gay, Luther Parks, jr., William G. Wheeler, F. H. Gray, James F. Harlow, George Russell, Charles E. Ware, E. W. Blake, Edward H. Clark, Samuel Gregg, E. D. Miller, C. G. Putnam, Charles A. Phelps, John Odin, jr., Joseph

ynolds, George Hayward, jr., Henry Osgood Stone, G. Newton Thompson, M. Phipps, Abner Phelps, Josiah Curtis, E. D. G. Palmer, Daniel V. Folts, L. Hinckley, J. W. Hinckley, M. B. Leonard, P. E. Molloy, Henry Bryant, Charles E. Buckingham, J. W. Warren, jr., D. D. Smith, George Tower, William Read, J. F. W. Lane, Const. B. O'Donnell, M. R. C. S. E., John S. Hogg, Edmund T. Eastman, William S. Coffin, John C. Sharp, Alexander S. Cutler, Benjamin B. Appleton, M. Mattson, David Thayer, J. C. Sanborn, E. Kittredge.

Charlestown.—E. E. Braun, A. J. Bellows, Benjamin Seabury, George W. Tis, jr., Charles H. Allen, A. C. Webber, I. P. Alden, W. W. Wellington, H. Chase, Charles F. Foster, A. J. Cummings, Thomas J. Farnham, Hutchinson, A. J. Maine, Alexander Poole, James B. Forsyth, John Toomey.

Chelsea.—William Ingalls, physician and surgeon United States Marine hospital.

Salem.—A. L. Peirson, William Mack, George Choate, William Henry Prince, J. G. Wood, James Stone, jr., E. B. Pierson, George C. S. Choate, George A. Perkins, H. Wheatland, Samuel Johnson, Edward A. Holyoke.

Taunton.—Alfred Baylies, H. B. Hubbard, Horace Bowen, Ebenezer Dawes, William Dickinson, Daniel King, George Leonard.

Newburyport.—E. Cross, S. M. Gale.

Lynn.—A. S. Adams, J. T. Galloupe, Daniel Perley, D. A. Johnson, E. Porter Eastman, James M. Nye, John Renton, Nathaniel Ruggles, Charles M. Weeks, Edward Newhall.

Worcester.—Henry Clarke, Samuel Flagg, George A. Bates, Charles W. Whitcomb, Joseph Sargent, Oramel Martin, William Workman, Rufus Woodward, Henry Sargent, A. Goulet, P. B. Mignoult, Benjamin Heywood, John B. Athaway.

Springfield.—James M. Smith, Edwin Seeger, N. Adams, A. S. McClean, Alfred Lambert, C. C. Chaffee, H. A. Hamilton, Henry B. Vaille, D. C. Perkins.

Pittsfield.—H. H. Childs, president of Berkshire Medical Institution; N. S. Barnes, O. S. Root, Frank A. Cady, O. E. Brewster, Nathaniel Foote, Avery Williams, A. N. Allen, L. F. Humeston, Willard Clough, Clark F. Hall, N. J. Wilson.

New Bedford.—T. S. Mayhew, Johnson Clark, John H. Jennings, William Gordon, Elijah Colby, C. D. Stickney, John Howell Mackie, Paul Spooner.

Fall River.—James W. Hartly, P. A. Smith, Jerome Dwelly, Foster Hooper, T. Learned.

Lowell.—John O. Green, Henry Whiting, J. P. Jewett, J. D. Pillsbury, F. A. Huntington, John W. Graves, Charles A. Savery, Joel Spalding, David Wells, Benjamin Skelton, H. Pillsbury, P. P. Campbell, L. B. Morse, Charles Davis, Plover G. Kittredge, Daniel Holt, Daniel Mowc, J. W. Scribner.

Lawrence.—George W. Sanborn, William D. Lamb, David Dana, J. H. Morse.

South Andover.—James Howarth, W. H. Kimball.

Dedham.—Jeremy Stimson, D. P. Wight, H. F. Spear.

Fitchburg.—Thos. R. Boutelle, Levi Pillsbury, T. W. Wadsworth, W. M. Ureth, Henry M. Linard.

Plymouth.—James L. Hunt, Winslow Warren, Benjamin Hubbard, Timothy Gordon.

Hingham.—Ezra Stephenson, Robert T. P. Fiske.

Quincy.—Ebenezer Woodward, William G. Pattie, W. Goddard.

Danvers.—Andrew Nicholls, Joseph Osgood, David A. Grosvenor, George good.

Marblehead.—James C. Briggs, Chandler Flagg, Daniel Gill.

Beverly.—W. C. Boyden, Charles Haddock, Ingalls Kittredge.

Gloucester.—Isaac P. Smith, C. H. Hildreth, George W. Smith.
Rockport.—Benjamin Haskell, Lemuel Gott, Oscar D. Abbott.
Newton.—Henry Bigelow, Cyrus K. Bartlet.
Framingham.—Simon Whitney, Allston W. Whitney.
Milford.—Francis Leland, Theodore O. Cornish.

Historical statement.

The foregoing pages set forth in outline the fact that there is a very general movement among the American people, inaugurated by leading members of the profession in Boston, New York, and Philadelphia, in behalf of one of the most praiseworthy objects which can appeal to patrons of science or the friends of humanity. They show that the noble work is at *last* undertaken, which, more than twelve years, has been neglected by Congress, to preserve the shelter of a home for the family of a nation's benefactor, still living, from the clamorous creditors to whom it was pledged for debts incurred in making and promulgating a discovery which, though leaving the discoverer poor, has made the whole world his debtor, and to place their future life beyond the chances and vicissitudes of fortune, by the purchase of an annuity.

The discovery made by Dr. Wm. T. G. Morton, of Boston, of the anæsthetic properties of sulphuric ether, and the safety, certainty, and reliability of its effects in making the severest surgical operations, childbirth, and other scenes and conditions of physical suffering, perfectly painless, is a discovery already ranked by the medical profession above that of vaccination by Jenner, to which the English Parliament voted large sums of money, and for whom national testimonials were raised and medals struck in other nations; a discovery whose benefits are not confined to the subjugation of pain, but which are continually unfolding in new departments of the healing art.

This national movement was with great propriety inaugurated in Boston, the city where the discoverer lived and practiced his profession, and where the first successful painless surgical operation was performed. An organization to raise a national testimonial fund in his behalf, with trustees residing in Boston, and treasurers in the principal cities in the United States, is already established. Though it is hardly passed beyond its inchoate period, it has enlisted the energetic co-operation of some of the most eminent and patriotic persons in the Union. All will learn with surprise that two hundred thousand dollars, not more than reimburse the discoverer of this anæsthetic agent for his outlay in making experiments which led to the discovery, in establishing its value, in compelling its acceptance by the world in spite of incredulity and indifference, in establishing the priority of his claims over *post facto* discoverers, and in applications to Congress to induce them to reimburse him for his actual expenditures.

A handsome beginning for the collection of this sum has already been made, though much remains to be done. The fund has received, as was most fitting, from the medical institutions of Boston and vicinity, and from eminent and wealthy persons residing in that seat of literature and science, munificent subscriptions. New York, too, represented in the same way by her medical institutions and her wealthy citizens, has shown an equal promptitude in discharging this debt of honor, too long owing to a nation's benefactor.

Such is a brief and general statement of the objects to be accomplished, and the present state of the enterprise.

It is not necessary to argue at any great length for the character or success of this undertaking. That would be almost an insult to the long list of persons distinguished in all the professions, and honorably known in commerce or in the more secluded walks of private life, who now appeal to the public at large to

justice in this matter. To doubt its success would be to challenge the sincerity of the great bulk of the medical profession in Massachusetts, New York, and Philadelphia, who ask subscriptions to this fund—would be to say that the world has gone back in the present century, and that the justice given to Jenner, who conquered small-pox in the last century, would be denied to Morton, who may be said to have conquered pain in this.

It may not be out of place, however, to recall here the universal thrill of joy that was felt when it was first announced to the world how the subtle spirit of ether would almost everywhere subdue pain, in the severest surgical operations, in the pangs of parturition, in the numberless cases at the hospitals, on battle-fields in time of war, in cottages "in piping times of peace," removing, as has been well said, "half the primal curse," and more than justifying the unstinted praise of the foregoing appeal of the medical profession in New York, which says:

"In view of these advantages from the use of anaesthetics, we feel that Dr. Morton, the first to demonstrate their safety and efficiency, and to establish them in general practice, has conferred a boon upon humanity as imperishable as it is important, and one of such a character as to entitle him to rank among the benefactors of mankind."

Neither is this the place or time to set forth as they deserve the labors and the sufferings which Dr. Morton has undergone in the twelve years which have succeeded his great discovery. The story of his wrongs, his patience, his perseverance, his unconquerable energy, his poverty, his enthusiasm, his success in achieving an imperishable honor, and his failure in obtaining the slightest emolument for an invaluable discovery, which the world now freely and daily uses, has more than the interest of romance.* They constitute a record which, except it is ended by the success of the movement whose inauguration has been set forth in the foregoing pages, will stand a burning disgrace and scandal to the profession and the world which have appropriated and used a discovery, and left the discoverer to starve. Shall it be said that, through his connexion with so great a benefaction to the human race, Dr. Morton is to be left unable to preserve to his children the paternal acres pledged in securing it; unable to educate his children, without any adequate means of support, and, worse than all, unable to secure for himself that quiet mode of life demanded by the ruined health consequent upon his hazardous experiments, and upon living in an atmosphere of ether for so many months, and upon the labors and sufferings which he underwent in detecting and establishing the anæsthetic properties of the sulphuric ether? These appellants, therefore, now appeal directly to the heart of the country, which rarely fails to disprove the heartless maxim that "republics are ungrateful," and which will never suffer a state of things so discreditable as that which we have briefly depicted long to last.

It is true that this mode of raising funds to consummate a simple act of justice is laborious and tedious. The present success of the movement shows, however, that that is the only great objection, and that individuals and institutions, and the country at large, are ready and anxious to discharge their obligations. The "ether controversy" has had the one good effect of waking up the public to the existence of those obligations. The sum required to accomplish the reimbursement and effect the designs of the appellants is, as we have said, a large one, and its collection by individual contributions, over an extent of country so vast as ours, is one of time; but it will derive an additional value as coming directly from the people, and the zeal and energy with which it has been entered upon by the profession in this city and elsewhere is the best augury of success. May it soon be impossible for one of the greatest benefactors of the human race who has appeared in this century to say, "It were better for me, infinitely better

* See "Trials of a Public Benefactor."

for me and my wife and children, better for me and them in all respects, if I had buried the secret of the victory over pain in my breast forever, and suffered centuries to elapse before it came forth to the knowledge of the world by some other hand, than to do as I did, hasten to make it known by all forms and modes of speech, and at every risk of health, property, and even life."

PROCEEDINGS OF HOSPITALS.

Massachusetts General Hospital.

The undersigned, to whom a proposition of the trustees of this hospital should contribute a fund to be established for the benefit of Doctor Morton was referred, report:

That Doctor Morton is known to have been chiefly instrumental in conferring a great good upon his race;

That his agency in a discovery which has already relieved multitudes from suffering has yielded to him no pecuniary compensation for its acknowledged benefits, but has, on the contrary, been attended by many sacrifices;

That his only rewards have been the consciousness of a great service rendered, and a title to fame;

That the government of the country has omitted to provide a proper reward;

That justice entitles him to remuneration, and that the only mode in which it seems to be probable that the means of doing that justice can be furnished is through voluntary contributions from the philanthropic, in some such form as is now suggested.

Therefore, your committee think that the object is proper, and that its early attainment is to be desired; so that the only question is whether the trustees may properly contribute of the funds of this institution for its promotion.

No ordinary circumstance would justify the trustees, should they apply any portion of the funds under their control to any object other than the direct relief of the sick under their care.

But the relations between Doctor Morton and this hospital, in regard to the great discovery which prompts the proposed memorial, are peculiar.

The first important surgical operation to which that discovery was applied was performed within its walls at his instance.

At a time when he supposed that his agency in it would be pecuniarily rewarded by those who should derive benefits from it, he conferred upon this hospital the right to profit by it in all cases without any charge.

We have been and shall continue to be benefited by it, to an extent which no reasonable amount of money could compensate for.

Doctor Morton and his friends think that the refusal of the trustees of the Massachusetts General Hospital to subscribe to the contemplated fund would prevent its foundation. In view of all the circumstances, your committee think that apprehension well founded.

When individuals have made bequests, or rendered remarkable services to the institution, the trustees have deemed it proper to expend such sums as may have been required to procure appropriate memorials of them, to be preserved within the walls of the hospital; and your committee think that the propriety of a subscription toward the fund which it is now proposed to establish for the benefit of Doctor Morton would rest safely on the grounds which have been found sufficient in such cases.

They therefore recommend that the subjoined vote be passed.

J. THOMAS STEVENSON,
JOHN LOWELL,

Committee.

BOSTON, February 22, 1857.

Voted, That the chairman of this board be requested to subscribe, on behalf of the Massachusetts General Hospital, *one thousand dollars* toward the fund which it is proposed to establish for the benefit of Doctor W. T. G. Morton, as a memorial of the great service which that gentleman has rendered to science and to humanity, in connexion with the discovery of the uses of ether.

Trustees.—Henry B. Rogers, John P. Bigelow, James B. Bradlee, William S. Bullard, William J. Dale, William W. Greenough, Thomas Lamb, John Lowell, Robert M. Mason, Charles H. Mills, J. Thomas Stevenson, Edward Wigglesworth.

Massachusetts Eye and Ear Infirmary.

Voted, That the secretary of this board be authorized to subscribe, on behalf of the Massachusetts Charitable Eye and Ear Infirmary, *two hundred dollars* toward the fund to be raised for the benefit of Doctor W. T. G. Morton, as a recognition of the greatest discovery of modern times, and an acknowledgment of the great service which that gentleman has rendered to science and humanity by the discovery of the uses of ether.

Trustees.—J. H. Walcott, J. W. Edmands, Henry Rice, Doctor E. Reynolds, G. H. Shaw, C. H. Mills, R. W. Hooper, Moses Grant, James Lawrence, Doctor S. D. Townsend, J. A. Blanchard.

THEODORE FROTHINGHAM,

Secretary.

New York Hospital.

“GEORGE T. TRIMBLE, Esq., *President of the Board of Governors of the New York Hospital*:

“SIR: The members of the medical profession of New York have made an appeal in behalf of Dr. Wm. T. G. Morton, of Boston, who was the first to discover and demonstrate by experiment the power of sulphuric ether to render the human economy insensible to pain under surgical operations.

“The object of this appeal is to raise, by voluntary contributions, a fund, as a national testimonial for his benefit, such as shall be a worthy acknowledgment of the priceless value of a discovery which has already done and is constantly doing so much to diminish human suffering.

“Boston, the scene of Dr. Morton's labors, has taken the initiation in this effort, and has made a noble beginning.

“It is believed that the action of the New York Hospital in reference to this appeal will exert an important influence on other kindred institutions in this city and elsewhere, and it is therefore earnestly hoped that the object will be regarded with favor by the board of governors. Nowhere in our whole land are the benefits of this discovery more constantly witnessed than in the New York Hospital, and there seems to be special propriety in such an institution acting a conspicuous part in acknowledging our common indebtedness to the discoverer of such a boon to suffering humanity.

“Having been delegated to present this object to your board, I beg leave, Mr. President, through you, to submit this communication, with the accompanying appeal, to that honorable body for consideration at their next meeting.

“I have the honor to remain, very respectfully, your o'bt serv't,

“GURDON BUCK, M.D.

“NEW YORK, July 3, 1853.”

The subject being thus fairly laid before the custodians of the institutions of New York, the Society of the New York Hospital, a close corporation, governed

by the gentlemen named in the note appended,* immediately voted that their president, Hon. George T. Trimble, subscribe five hundred dollars to the proposed fund.

Commissioners of Emigration, of the State of New York.

The commissioners of emigration, composed of the gentlemen named in the annexed note,† passed the following resolution:

"Resolved, That in view of the great benefits derived by the institutions and patients under the charge of the commissioners of emigration, by the use of sulphuric ether, the sum of two hundred and fifty dollars be donated to Dr. Wm. T. G. Morton, the discoverer thereof, as a consideration of the feeling of the board, with an expression of regret that the present state of the funds under their charge would not permit the commissioners to show a more substantial appreciation of the great importance of the discovery."

Bellevue Hospital.

The governors of the almshouse referred the subject to the committee on Bellevue Hospital to report. While considering the subject, the committee received from Stephen Smith, M. D., secretary, the following resolution, unanimously adopted by the medical board of Bellevue Hospital:

"Resolved, That the medical board of Bellevue Hospital cheerfully express their conviction that to the zeal, perseverance, and skill of Dr. Wm. T. Green Morton, of Boston, in using sulphuric ether to render persons insensible to pain, the world is indebted for the present extended and beneficial use of anæsthetic agents in the practice of medicine and surgery; and they are convinced that but for his energy, courage, and success, there is no reason to believe that mankind would yet have received that boon from any of the gentlemen whose names have been prominently connected with this subject.

"JOHN W. FRANCIS, M. D.,

"President Medical Board.

"STEPHEN SMITH, M. D., Secretary."

Referred to committee on Bellevue Hospital.

On the fourth of August the committee to whom the subject was referred reported in favor of appropriating the sum of \$1,500.

On September 14 the following preamble and resolution, appropriating fifteen hundred dollars, was adopted:

"Resolved, That this board view with high appreciation the initiatory steps taken by the medical faculty of the cities of Boston and New York to acknowledge, in a substantial manner, the discovery and appliances of sulphuric ether by Dr. Wm. T. G. Morton; and believing the same to be, as expressed and set forth in their testimonials, the greatest benefit of the present age rendered to science and humanity, deem it our duty, in consideration thereof

* George T. Trimble, Najah Taylor, Gulian C. Verplanck, James F. DePeyster, John A. Stevens, James I. Jones, Stacy B. Collins, George F. Hussey, Edwin D. Morgan, David Colden Murray, Robert Lenox Kennedy, John David Wolfe, George F. Jones, Joseph Walker, Thomas Hall Faile, Thomas B. Stillman, James N. Cobb, George T. Olyphant, John C. Green, David Clarkson, Abram S. Hewitt, Frederick A. Conkling, Nathaniel I. Bailey, Otis D. Swan, Henry L. Pierson, James W. Beekman.

† Gulian C. Verplanck, *pres't*; E. Crabtree, *vice-pres't*; B. Casserly, *sec'y*; F. D. Morgan, Wilson G. Hunt, Elijah F. Purdy, John P. Cumming, Cyrus Curtis, Mayor of New York, Mayor of Brooklyn, President of the German Society, President of the Irish Emigrant Society.

and of the many uses to which the same has been applied in the institutions under our charge, to unqualifiedly indorse the same.

"And he it further resolved, That the sum of fifteen hundred dollars be, and the same is hereby, appropriated as compensation for the use of sulphuric ether in the hospital under our charge, and the same be taken from the unexpended appropriation of Bellevue Hospital."

The president of the board of ten governors immediately made the subscription to the proposed fund.

CORRESPONDENCE.

During the last summer the governor of Massachusetts, N. P. Banks, late Speaker of the House of Representatives, wrote to his excellency the governor of New York that "a national subscription, intended as an acknowledgment of his (Dr. Morton's) great public service in the discovery, and introduction to common use, of this important power, (sulphuric ether,) has been commenced here under the auspices of gentlemen of the highest professional standing, who were themselves witnesses of the successive steps through which this discovery was made. They are men whose names alone are a guarantee that their statements may be relied upon, and no words of mine can aid in giving their opinion strength. In addition to that of merchants and professional men of the first eminence, you will find in the publication made by the trustees of the fund to be raised a petition to the President, signed by a majority of the members of the thirty-third Congress, which is, I think, to be regarded as an evidence of the very general estimate which was made of the claims of Dr. Morton upon the government and the public.

"The subscription has been liberally commenced in Boston, but it is thought that other cities that have been benefited by the discovery should participate in the recognition of the merits of the discoverer, and in making him appropriate honors. I hope that other cities may imitate the example of Boston in this respect, and contribute something to aid and, I may say, relieve one who is certainly deserving of great credit, and who has as yet received no advantage from his discovery."

Dr. James Jackson wrote to George Ripley, one of the editors of the American Cyclopaedia: "To him (Dr. Morton) the world owes at least the introduction for useful purposes of sulphuric ether, by employment of which, by inhalation, he *proved* that insensibility might be produced in a human subject with safety, and be maintained during powerful surgical operations. It is now more than eleven years since he made this discovery known. At the present day the benefit of it is known throughout the civilized portion of the world. Every day the persons who use the article must be counted by thousands. If the knowledge of it could be lost millions and millions of dollars could be raised for the recovery of it. Every man is liable to the misfortunes which would make the use of it invaluable to him.

"Is not something due to the gentleman who introduced the use of ether for the use of the present and all future generations of men? Shall it be recorded in history that he lived on a very small income while millions were blessing his discovery? Should he not be paid in some substantial manner? As I understand the matter, his business has been destroyed, strange to say, and he needs aid. May I ask you to make his case known in New York, in the hope that he may receive the evidence of such gratitude as is due to him?"

Dr. Jacob Bigelow, president of the Academy of Arts and Sciences, wrote to Dr. Parker, that, "I hope the community who are daily deriving the benefit of his (Dr. Morton's) inestimable discovery will not be insensible to the debt they

owe him. He is the only man without whom the world would at this day have wanted the blessing of anæsthetic inhalation."

Dr. O. W. Holmes wrote to Willard Parker, M. D.: "It gives me great pleasure to add my name to that of my friends who have recommended the claims of Dr. W. T. G. Morton to your favorable notice.

"A surgeon in great business like yourself must know well what we owe to the discoverer of the use of ether in surgery. The part Dr. Morton took in that is matter of history, and I cannot but think you will agree with us in believing that but for his happy audacity we should have waited an indefinite period for the discovery.

"I write this time, therefore, to request your kind consideration of the subject that will be presented to your notice, not professing to have any personal claim upon your valuable time, but considering that your position entitles you to the honor of being among the foremost in every movement involving the interest of science and humanity."

Dr. John Jeffries wrote to Willard Parker, M. D.: "Of the justice to his (Dr. Morton's) claim, as the person by whom this great benefaction was conferred on the medical profession, and upon mankind, I entertain no doubt; and consequently, of the weight of obligations which physicians and societies at large are under to him for this benefit. A public benefaction has been set on foot for Dr. Morton, who is himself poor, and made so, in some measure, in consequence of his agency in providing a blessing for mankind. It has my full approbation and best wishes for its success. I would also express my confidence in the plan and details by which it was carried out, arising from the high character for intelligence and integrity of gentlemen under whose auspices it is to be conducted. Whatever you may please to do to aid will be on the side of justice and humanity."

Dr. S. D. Townsend, one of the surgeons of Massachusetts General Hospital, wrote to Willard Parker, M. D.: "Having been conversant with the use of ether from the first day of its introduction, I have always given to Dr. Morton the credit of being the author of its extensive employment into our profession. The object of this movement is to obtain subscriptions to a fund, to be placed in the hands of trustees for his (Dr. Morton's) benefit, which is to be raised from different hospitals in the country that have been so greatly benefited by its use. Dr. Morton's pecuniary circumstances have been greatly reduced by the exclusive attentions he has paid to this object, having entirely broken up the business which he was extensively engaged in, and he needs the aid of all professional men who have been so greatly benefited by this discovery. I am sure I can rely upon you to give it all the assistance which your prominent situation can afford him."

Nathaniel I. Bowditch, esq., in a letter to Amos A. Lawrence and John Lowell, trustees of the Morton fund, says: "Circumstances, as you are aware, made me originally take great interest in the ether discovery. In the hospital report, and a pamphlet in vindication of it, I have expressed as forcibly as in my power my conviction that it is to the boldness, energy, and perseverance of Dr. Morton that the world owes the demonstration of this great truth of science. I have never seen the slightest reason for doubting the accuracy of the conclusion at which I first arrived. It happens that in my own person I have already had occasion to be especially thankful for this blessing. Ether has been administered to me no less than seven times, and on each occasion has saved me from great suffering. I consider Dr. Morton, indeed, to be one of my permanent attendant physicians, and one the value of whose prescription cannot be estimated in money or expressed in words. I have therefore cheerfully subscribed \$500 on the book which you sent me."

Thomas B. Curtis, esq., of Boston, in a letter to William E. Bowen, esq., of Philadelphia: "Dr. Morton first made known to the world the blessed effects of ether in doing away with pain. Instead of riches and honor, he has reaped

nothing from his great discovery. Our government has cheated him, but they have not deprived him of the support of the most eminent surgeons in America, and the sympathy of many of our best citizens."

Dr. William H. Van Buren, of the New York Hospital, in a letter to Professor Neill, of Philadelphia: "Here there was no dissenting voice in the right quarter, that is, among the profession, and I think on the broad ground of humanity Dr. Morton has a right to our support. His misfortunes entitle him to our regard above all other considerations."

Dr. Fordyce Barker, of the Bellevue Hospital, New York, in a letter to Dr. Edward Hartshorne, of Philadelphia: "The profession in this city and in Boston have with great unanimity made an effort to induce the people to bestow upon Dr. Morton some reward proportioned to the value of his discovery, and it is hoped that our brethren in Philadelphia will join heartily in the endeavor."

Dr. George T. Eliot, of the Bellevue Hospital, New York, in a letter to Dr. Biddle, of Philadelphia: "I sincerely think that Dr. Morton ought to be placed above the necessity for labor during his life, and that it is a reproach to the United States that the government did not behave differently. The feeling of the profession here is in favor of the testimonial in his behalf."

Dr. Batchelder, president of the Academy of Medicine, New York, in a letter to Professor Meigs, of Philadelphia: "Dr. William T. G. Morton, the discoverer of anæsthesia, now so universally employed in the alleviation of human suffering, in perfecting his discovery and in introducing it to the world, has made great sacrifices, and it is no more than just that he should reap some reward, small though it may be in comparison to the vast benefits which he has conferred upon suffering humanity. The appeal to the justice and liberality of our fellow-citizens has been gladly seconded by the profession in this city, and I have no doubt that such will be the case in your city."

Dr. John H. Griscom, of the New York Hospital, in a letter to Prof. George B. Wood, of Philadelphia: "The medical profession of Boston and in New York have taken great interest in the effort now in progress to obtain from the people a testimonial of a substantial character in favor of Dr. Morton, whose sacrifices, means, time, and health in his devotion to the perfecting of this most extraordinary discovery, render some pecuniary return essential. We regard this as a truly national matter, to which the profession of the whole country should lend their aid."

Dr. Isaac Wood, of the Bellevue Hospital, New York, in a letter to Prof. George B. Wood, of Philadelphia: "At a meeting of our medical board, held last evening at my house, a resolution was unanimously passed, to recommend the testimonial to Dr. Morton to the favorable notice of the board of ten governors of the Bellevue Hospital."

Prof. Valentine Mott, of New York, in a letter to Prof. Pancoast, of Philadelphia: "The profession here generally award to Dr. Morton the honor of this great discovery. We have been doing, for the testimonial to him, a little in this city."

Dr. John W. Francis, of New York, in a letter to Prof. Samuel Jackson, of Philadelphia: "Something, our entire faculty have determined, must be done for Dr. Morton as a great benefactor to humanity. In New York we are not idle. Our Bellevue Hospital, I believe, will make a liberal donation."

Dr. F. M. Markoe, of the New York Hospital, in a letter to Dr. Franklin Bache, of Philadelphia: "We have been much interested in the matter of the testimonial to Dr. Morton, and feel the conviction that not only he is entitled to the credit of the discovery of this great practical use of ether, but that the country owe him a debt of gratitude which ought to take some tangible and available form."

Prof. Alfred C. Post, of New York, in a letter to Prof. S. D. Gross, of Philadelphia: "I hope the profession, of your city, will take an interest in

obtaining from the community some substantial acknowledgment of the great services which Dr. Morton has rendered to science and humanity.

"I think, from the investigations which I have made, that there is no reason to doubt that he is entitled to the exclusive merit of introducing the valuable discovery which he claims to have made, and that the efforts which have been made by others to deprive him of his claim have been characterized by gross injustice."

Dr. B. W. McCready, of the Bellevue Hospital, New York, in a letter to Dr. W. H. Gobrecht, of Philadelphia: "It has been deemed just, by the leading medical men of Boston and New York, that Dr. Morton should realize something more from his discovery than barren honors, to which he has to support his claims at his own expense."

Prof. Willard Parker, of New York, in a letter to Mr. Allsop: "Dr. Morton has laid the civilized world under an infinite obligation, and exhausted his means by so doing. I am desirous that some return should be made, and he be relieved from his condition of want. In this city a movement is being made in furtherance of this object."

Dr. John Watson, of the New York Hospital, in a letter to John A. Stevens, esq.: "As our national government is not likely to remunerate Dr. Morton for the trouble and expense, not to speak of loss of business, to which he has been subjected, American people should take his sacrifices into serious consideration, and show by their own liberality that what the government cannot do, the people are not willing to leave undone."

Subscriptions that head the Boston and New York contributions.

Board of ten governors for the city of New York, \$1,500; Massachusetts General Hospital, \$1,000; Amos A. Lawrence, \$1,000; John P. Cushing, \$500; the Society of the New York Hospital, \$500; the Commissioners of Emigration of the State of New York, \$250; James Brown, \$500; John David Wolf, \$250; Peter Lorillard, \$250; James Lenox, \$250; Benjamin L. Swan, \$100; George T. Trimble, \$100; Robert B. Minturn, \$100; John C. Green, \$100; Joseph Sampson, \$100; James Donaldson, \$100; Henry Chauncey, \$100; Charles A. Davis, \$100; James Boorman, \$100; George Griswold, \$100; Morris Ketchum, \$150; Robert Ray, \$100; E. D. Morgan & Co., \$100; Josiah Macy & Sons, \$100; Jonathan Thorn, \$100; John Gardner, \$200; Massachusetts Charitable Eye and Ear Infirmary, \$200; Thomas B. Curtis, \$100; Nathaniel I. Bowditch, \$600; Charles H. Mills, \$100; John J. May, \$100; David Sears, \$100; Edward Wigglesworth, \$100; James Bowden Bradlee, \$100; Josiah Bradlee, \$100; James Lawrence, \$100; John A. Lowell, \$100; Thomas Lee, \$100; J. M. Forbes, \$100; Benjamin H. Field, \$100; Charles C. Goodhue, \$100; S. L. Snarez, \$100; William E. Wilwarding, \$100; Lorillard Spencer, \$100; Catharine L. Spencer, \$100; Augustus Belmont, \$100; Armstrong & Son, \$100; John Bridge, \$100; B. M. Whitlock, \$100; William B. Astor, \$100; Charles H. Marshall, \$100; H. B. Claflin, \$100; J. B. & W. W. Connel, \$100; Gardner Brewer, \$100; Frederick Tudor, \$100; Pierce & Bacon, \$150.

But fourteen years passed away and the United States had done nothing to reward the discoverer. The patent granted to him expired—it had produced only annoyance and expense; but disheartened by the repeated failures of his applications for relief, he applied for its extension, which was refused on technical grounds. The United States has used and continues to use the discovery in surgical operations, sometimes to the number of a thousand in a day. It has the entire approval of the medical departments of army and navy, greatly

ating the pain and suffering of the wounded, and in most cases entirely relieving it during the performance of surgical operations. But as far as the United States is concerned, the discoverer has passed unrewarded, and the patent is given to him to secure him the benefit of his invention, which would have been secured and which would have made his fortune had it been a new and valuable improvement in making *washboards* or *buttons*, has been used by the United States without respect to his rights, and as by the government so under the example by the people. In the recent terrible disaster of our army at Fredericksburg Dr. Morton himself administered his ever potent *nepenthe* without a single failure to hundreds of wounded men brought under the probe knife. A view of its benefits and effects by the head of the medical department of the army of the United States will be presently introduced, showing that it has lost none of its value and suffered nothing in public estimation by the trials which wear out and consume the discoverer, do but add fresh proofs to the discovery.

The medical director of the ninth army corps, second division, Dr. Alexander Watson, says:

Dr. Morton reported himself to my field hospital after the horrible battle at Fredericksburg, and I gave the fullest scope in my hospital to ether *versus* chloroform, and from the sadly ample opportunity for testing both, I am an etherist. The surgeon-in-chief, Dr. Calvin Cutter, of Sturgis field hospital, and his entire staff, Drs. Leonard, Hassock, and Webster, in a communication to Dr. Morton immediately after the battle at Fredericksburg, state that they could not have performed so many needful operations and so well without anæsthetics. Ether use not only entirely prevented or greatly mitigated the sufferings of the patients, but it very materially lessened the embarrassment of the operating surgeon.

We deemed the success good—no patient died during the operation or immediately subsequent from shock of operation.

Permit us to return thanks for the administration of anæsthetics to the patient by yourself. It was essential aid to our surgeons."

The plain proposition should at least be borne in mind, and honestly responded to. Dr. Morton was the patentee. The United States has used it with advantage which cannot be estimated, even counting by millions. What answer can be given when the patentee claims a moderate and reasonable compensation, enough to pay him fairly for his time, toil, and expense in discovering, perfecting, and giving it to his country? It will not do to say that others claim the discovery. There is no other patentee; and it is clear, beyond controversy, that whatever ideas may have *thought* and *reasoned* and *hoped* and *suggested*, no one but he brought it to the public and the world. Dr. Morton alone brought it to the attention of the medical faculty; he lived and moved and had his being in the discovery. When it was attacked, he alone defended it, and he exhausted his health, strength, and fortune to make it triumphant, and in the language of the report of the trustees of the Massachusetts General Hospital, "it is a mortifying fact that Dr. Morton's pecuniary affairs have become embarrassed in consequence of the interruption of his regular business, resulting from his efforts and experiments in establishing this great truth, and that his health has also severely suffered from the same cause, so that he can devote only a small part of each day to his professional labors. He became poor in a cause which has made the world his debtor. The committee have the highest medical authority (that of Romans) for saying that, from living so much of late in an atmosphere of controversy, and from the anxiety attending the various trials and experiments connected with the discovery, and from the excitement caused by the controversies which it has occasioned, the health of Dr. Morton has become such that he is unable to attend to his professional duties to any extent."

Whatever others may claim, without him, or some other possible person not

now in conflict with him, the discovery would have been yet with the future in the womb of time. To him, and to him alone, in the opinion of your committee, is therefore due the reward, and it should at last be rendered to him with no grudging or stinted hand; and waiving the obvious ground of compensation just considered, your committee entertain no doubt that Dr. Morton is in the just and practical sense of the term, the sole and original first discoverer of the application of sulphuric ether as an anæsthetic agent. They found this opinion on the evidence, and it is supported and strengthened by the expressed and well-reasoned opinion of the several committees of Congress to whom the subject was successively referred, and especially by the opinion of the medical faculty of Boston, a most intelligent jury of the vicinage, and the faculties of New York and Philadelphia, who brought to the question a high and disinterested intelligence. On the whole, no doubt as to this is left on the mind of your committee, but the evidence as to conflicting claims will be considered fully in the sequel.

The question of who was the discoverer being thus, as the committee to be placed beyond dispute, they turn their attention next to the *value* of the discovery.

It supplies a desideratum long sought by surgeons for the relief of the excruciating pain they were necessarily obliged to inflict in the practice of their profession. They had, as heretofore stated, vainly attempted this relief by use of opiates, extract of hemp, mesmerism, &c., but none fulfilled the desired purpose; and their suggestion of the necessity to life or limb of an operation was apparently ever doomed to be accompanied with the (to many) all-absorbing feeling of terror of the pain which there was no means of avoiding. Dread of pain has not unfrequently deterred from submission to operations necessary to the preservation of life. In other cases, where this dread was overcome, the operation performed, the severity of the suffering and the shock to the system have been large elements in the production of a fatal result. Since the introduction of etherization, both the patient and surgeon approach the operation with feelings entirely different from those formerly entertained under similar circumstances. The latter is relieved from the necessity of witnessing the manifestations of pain which his instruments formerly produced, and to become indifferent to which he must be more or less than human, while the former looks only to the end to be attained—the restoration to health—there being no intermediate pain to excite his dread and fix his exclusive attention. For screaming, and struggles, and intense suffering under the surgeon's knife, etherization has substituted more or less complete exemption from pain, associated in some with the quietude, mental and corporeal, of deep sleep; in others with pleasing dreams, imaginary busy scenes, and sweet music; and in others with a perfect consciousness of surrounding objects and events, making the patient, perhaps, not among the least calm or most anxious spectators of the operation.

And its benefits are by no means confined to surgical patients and surgical practice. The obstetrician finds in it the means of alleviating that distress which woman has ever heretofore been cursed, when in the act of becoming a mother. And who would not hail with delight any means of ministering comfort to her who bears the holy name of mother? To the physician it affords one of the most useful, as it is one of his most prompt, remedies. He, too, is often compelled to be the spectator of severe pain and distress, for the alleviation of which his before known remedies were powerless. He, before, had no reliable means of relieving the spasms of tetanus; he not unfrequently failed to procure sleep in *delirium tremens*, when the question is one of sleep or death; he had his before palliative remedy (opium) for the pain of colic, too often purchased only temporary relief at the expense of an aggravation of the cause of the distress, and of increased difficulties in its cure; and he occasionally witnessed the breaking up of the system of a neuralgic patient, more as a consequence of

ated large doses of opium to which he was constrained to resort for the mitigation of his paroxysms, during the slow progress of curative remedies, in of the disease itself. But an enumeration of all, or of any considerable number of the cases in which he finds it useful, may, indispensable, is neither desired, nor would it be proper in a paper of this character.

Being of indispensable value to all, as all are liable to require its use, the discoverer is entitled to reward, as a benefactor of the human race. Great Britain, France, and all other enlightened nations, have, from time immemorial, rewarded munificently such services to humanity. The British Parliament, by two successive statutes, bestowed upon Jenner the sums of ten thousand and twenty thousand pounds for the discovery of vaccination. The world has as yet produced but one great improvement in the healing art deserving to be ranked with that of Jenner. America, by annihilating pain, has done as much for the benefit of the race as England did when she furnished the instrument by which the small-pox may be finally exterminated.

Alike honorable to themselves and to our own countryman, Professor Morse, several of the principal governments of Europe joined in presenting him an honorary testimonial of eighty thousand dollars for the telegraph discovery. What, we ask, would England have done had she the glory of counting etherization among her achievements?

Congress has frequently rewarded individuals for discoveries of limited importance, which in no wise entitled them to a place among the benefactors of mankind. Dr. Borland, in a speech upon this subject during 33d Congress, said:

"In the next place, lest it might occur to the minds of some that purchasing the right from a patentee to use a valuable discovery is a new thing in our government, I beg leave to call attention to the records, which show that it is no new practice, but for years and years has been repeated over and over again. I will give a few cases. We paid for the right to make anchors of a certain form for the navy, \$1,500; for the use of circular bullet moulds, \$5,000; for the use of gas in hot baths, \$5,000; for elevating and pointing heavy cannon, \$20,000; for the right to use patent anti-attrition metal, \$20,000. We paid to the heirs of Robert Fulton, for benefits conferred by his improvements in steam navigation, \$3,300. We paid for Mix's manger stopper, used in the cavalry service, \$1,000. We paid to Dr. Locke, for the use of his magnetic clock, \$10,000. We paid to McCulloch & Booth, for the right to use the improved method of refining argentiferous gold bullion, \$25,000; thus making an aggregate of \$165,000 paid in these cases. But, in addition to these, there have been numerous instances in which patent rights, or the privilege of using in the service of the government patented articles, have been purchased by the departments, some of which instances I find cited in connexion with the report of the select committee of the House of Representatives, for which were paid \$178,032—making an aggregate of \$343,000 paid by the United States for patents and the use of patented articles.

"Since I have been a member of the Senate, when meritorious individuals have come before us, who had made important discoveries, we have aided them to test their discoveries by appropriations, amounting in the whole to \$120,000.

"I mention these facts to show that precedents are all in favor of such use of the public money to enable the government to avail itself of important discoveries."

Though fully satisfied of the value of the discovery, the committee thought it not proper to act upon their own unaided opinion. The chairman addressed letters to the medical bureaus of the army and navy, and particular attention is given to their answers and to the replies of the former heads of those departments, also to extracts from letters from the surgeons in the government service, and the medical profession generally, which were published in a former report.

SURGEON GENERAL'S OFFICE,
Washington City, D. C., February 24, 1863

SIR: I have the honor to acknowledge the receipt of your communication of this day asking my views relative to compensation to be paid Dr. W. T. G. Morton for the advantages which the Government has received from the use of anæsthetics in the army and navy, and for the benefits which will in future be derived from it.

I think there would be manifest propriety in giving Dr. Morton a substantial reward for the great discovery made by him—a discovery which has been of incalculable benefit to the sick and wounded of the army and navy. It may be safely asserted that in per cent. of the operations performed in our military hospitals and on the field of battle anæsthetics are used.

I am clearly of the opinion that the sum of two hundred thousand dollars would be little enough to bestow on Dr. Morton for the advantages which have accrued and will accrue in future to the Government through the use of the means, which he was the first to discover, of alleviating human suffering. It gives me great pleasure to state that immediately after the battle of Fredericksburg, Dr. Morton administered ether several times, Falmouth, with the greatest skill and efficiency to patients upon whom I was operating.

I am, sir, very respectfully, your obedient servant,

W. A. HAMMOND, Surgeon General.

HON. HENRY WILSON,

Chairman Military Committee, U. S. Senate, Washington, D. C.

NAVY DEPARTMENT,
Bureau of Medicine and Surgery, February 2, 1863

SIR: I have the honor to acknowledge the receipt of your communication of the 29th ultimo, inquiring whether or not anæsthetics are generally used in surgical operations performed by the surgeons in the service of this government.

I beg leave to state, in reply, that anæsthetics have come into such general use that a surgical operation performed without such agents may be regarded the exception to an almost universal rule in this as in other countries.

In the Crimea alone, according to the calculations of Mr. Scriver, it was administered to more than twenty thousand wounded.

Very respectfully, your obedient servant,

W. WHELAN

HON. HENRY WILSON,

Chairman Committee on Military Affairs, U. S. Senate.

SURGEON GENERAL'S OFFICE, March 1, 1862

SIR: In compliance with your verbal request to be furnished with information in regard to the employment of anæsthetic agents in the army of the United States, and also for an expression of opinion as to the value and importance of this class of remedial agents, I have to state:

That sulphuric ether and chloroform were used to some extent in the military hospitals established at the theatre of war in Mexico, but the use of those articles was not so general as at present, for the reason that the apparatus at that time believed to be essential to their proper and safe administration was not adapted to service in the field.

At the present moment it is believed that no surgical operation of importance is performed by the medical officers of the army without the aid of some anæsthetic agent.

Previous to the discovery of this new application of sulphuric ether, the usual supply of that medicine was one pound for every hundred men. On a revision of the standard supply table, by a board of medical officers in 1849, pure washed sulphuric ether was substituted for the ordinary sulphuric ether, and the quantity allowed was increased one hundred per cent. At the same time another anæsthetic agent, the tincture of chloroform, commonly called chloroform ether, was added to the supply table, and is now regularly furnished to the medical officers in such quantities as, in connexion with the sulphuric ether, will suffice to meet all the demands of the service in this particular.

Although the discovery of this new therapeutic effect of sulphuric ether

any way militate against the merits of the original discovery, which I regard one of the most important and valuable contributions to medical science, and the relief of suffering humanity, which has ever been made, the only discovery to be compared therewith being that of vaccination, which has rendered the name of Jenner immortal.

Through the influence of these remedial agents, the surgeon is not only enabled to perform the most extensive and difficult operations, undisturbed by the pains and struggles of the patient, but what is of far greater importance, the patient, being rendered insensible, escapes that shock to the nervous system which itself is not unfrequently fatal. For this reason operations can now be performed with much more safety than heretofore, and that, too, in cases in which an attempt to perform them would have been forbidden by the general condition of the patient.

To the physician this class of remedial agents promises to be of the greatest utility, though their application in the treatment of disease has yet to be more fully developed.

It will suffice at this time to allude to their employment for the relief of suffering women in the hour of her greatest trial, and at the moment she claims our warmest sympathies. That these agents can be safely used in parturition, so as to afford full and entire exemption from pain to the mother, and with safety both to her and to the child, has been amply demonstrated.

In conclusion, permit me to congratulate you upon the flattering testimonial you have received from the National Institute of France for this discovery, and express the hope that, inasmuch as it is impossible for you to derive any pecuniary benefit therefrom in ordinary course by letters patent, you may receive in your country that acknowledgment of your merit which is due to one who has conferred so great a boon upon mankind.

I am, very respectfully, your obedient servant,

TH. LAWSON, *Surgeon General.*

W. T. G. MORTON, M. D.,

Brown's Hotel, Washington, D. C.

TREASURY DEPARTMENT, *June 25, 1852.*

SIR: I have the honor to acknowledge the receipt of your letter of the 17th instant, covering copies of a communication from the Hon. W. H. Bissell, of a letter from the chief of the Bureau of Medicine and Surgery of the navy, and a letter from the surgeon general of the army, with certain printed matter, relating to the memorial of Dr. Wm. T. G. Morton, asking remuneration from Congress for the discovery of the anæsthetic properties of sulphuric ether.

An attentive examination of these several documents has satisfied me that sulphuric ether and tincture of chloroform are very generally used in the army and navy of the United States as anæsthetic agents; and the decided testimony borne to the merits of these ethereal preparations by the chief of the Bureau of Medicine and Surgery of the navy, and the surgeon general of the army, leaves no doubt upon my mind as to their great value in medical and surgical practice. In addition to the evidence thus afforded in their favor, I may mention the fact that these agents now form a part of the regular medical supply to the marine hospitals of the United States, and that they are employed therein with very general success.

Regarding the discovery of the anæsthetic properties of sulphuric ether, as the language of Surgeon General Lawson, "one of the most important and valuable contributions to medical science, and to the relief of suffering humanity, ever made," I concur entirely with Col. Bissell and yourself, as to the propriety and justice of liberally compensating the patentee, who has not at any time received pecuniary advantage from his discovery, and who now appeals to the legislature

of his country, on condition of the surrender of his patent for the benefit of mankind, for proper remuneration in lieu of the gains that he would have realized had he been protected in the use of the rights conferred upon him by letters patent of the government. I therefore recommend that such reasonable and liberal sum, as the committee of which you are chairman, may, in their discretion, determine upon, be reported as a *national compensation* to Dr. Morton and that the same be attached, as proposed by Col. Bissell, to the "naval appropriation bill" for the ensuing fiscal year.

I have the honor to be, very respectfully, your obedient servant,

THO. CORWIN,

Secretary of the Treasury

Hon. FREDERICK P. STANTON,

Chairman Naval Committee, House Reps.

WAR DEPARTMENT,

Washington, June 21, 1852

SIR: I have received your letter of the 7th instant, enclosing sundry documents relating to the memorial of Dr. William T. G. Morton, who seeks remuneration from the government for the discovery of the anæsthetic properties of sulphuric ether.

In reply I beg leave to state that I have no information on the subject of this discovery other than that which I have derived from public rumor and from documents you enclose, it being exclusively a professional question. All information which this department could furnish the committee is contained in the letter from the surgeon general, which is among the papers you enclose.

Judging from this information, there can be but little doubt that this discovery is one of the most valuable contributions that science has ever made to the cause of humanity.

I do not know what the practice of the government has been in regard to rewarding individuals for inventions or discoveries made by them, or, at least, compensating them for the use of them in the public service, but I do not hesitate to say that if it has been the practice of Congress to grant such rewards or compensation, Dr. Morton's claim is fairly entitled to the most liberal consideration.

Very respectfully, your obedient servant,

C. M. CONRAD.

Secretary of War

Hon. FREDERICK P. STANTON,

Chairman Committee on Naval Affairs, House of Reps.

NAVY DEPARTMENT, BUREAU OF MEDICINE AND SURGERY,

June 29, 1852.

SIR: I have had the honor to receive your letter of yesterday's date, in relation to the memorial of Dr. W. T. G. Morton, asking of Congress remuneration for the discovery of the anæsthetic properties of sulphuric ether, and calling upon me for a statement as to the basis on which the claim is founded, with an estimate of the amount to which, in my opinion, he is entitled, on the score of the benefits and advantages resulting from its use in the naval service.

As the views of the bureau in regard to the importance of this discovery have been already expressed in a communication to Dr. Morton, I beg leave to restrict so much of it as relates to this branch of the subject.

"In reply to your inquiry as to the importance attached to the late discovery of etherization, by the medical corps of the navy, it gives me pleasure to express the high sense they entertain of its utility, not only in surgical practice, but as a powerful agent in many painful affections which have resisted the ordinary remedies. This opinion is strengthened by the concurrent testimony of

best civil practitioners of our own country, with the emphatic indorsement of value by the best British and continental surgeons.

The gist of this discovery consists in finding that nervous perception is suspended under the influence of the etherial inhalation; and, while suspended, the patient is unconscious of pain under the operation of the knife. In addition to the great benefit derived from its use, in alleviating pain, it has a decided effect in diminishing mortality. Its advantage in this respect appears in saving the system from the severe shock and nervous exhaustion which attend most of the graver surgical operations, and which of themselves often prove fatal.

It dispels the fear of pain which formerly prevented many from submitting to an operation, or induced them to defer until too late.

It enables the surgeon, also, to operate coolly, and effectually, undisturbed by the cries and struggles of the patient, which sometimes unnerves the steadiest hand, and render abortive the best directed efforts."

In regard to the grounds on which Dr. Morton bases his claim to pecuniary remuneration from the government, I would state that from the peculiar nature of the discovery, it is impossible to protect the inventor in the exclusive advantage of it by letters patent. The novelty of the discovery consists in the new application of an old remedial agent, and the privilege of using it, on the part of the profession at large, cannot be practically curtailed by statutory enactment. The inventor is thus deprived of the pecuniary advantages of his discovery, and justified in appealing to the government, which also largely avails itself of the benefits derived from it, for relief.

It will be difficult to estimate the amount which the inventor may reasonably expect of the government in consideration of the advantages attending its use in two services. For the reasons above mentioned, the cost of the ether itself cannot enter as an element into the calculation, and the fairest estimate, I conceive, might be more nearly approximated by the amount one would be willing to give to be rescued from impending death, or to be relieved from urgent and tolerable pain.

I would express the opinion, however, that the sum of *one hundred thousand dollars*, proposed by the select committee of the House of Representatives as a compensation to the inventor, is nothing more than a fair equivalent for the immense advantage resulting to the government and country from this important discovery.

I am, very respectfully, your obedient servant,

THOS. HARRIS,

Chief Bureau of Medicine and Surgery.

HON. WM. A. GRAHAM,

Secretary of the Navy.

Extract of a letter from John Watson, M. D.

NEW YORK HOSPITAL, *January 10, 1852.*

The wonderful action of ether and the other anæsthetics in alleviating suffering, and in overcoming spasm and muscular resistance during the most protracted, difficult, and delicate surgical memulations, is sufficient to place them among the most useful discoveries that ever have been effected, and to entitle Dr. Morton, who first demonstrated the anæsthetic properties and use of sulphuric ether, to the gratitude of his countrymen, and to give him rank among the benefactors of the human race.

I remain, with becoming respect,

JNO. WATSON.

GEORGE NEWBOLD, Esq.

WEST POINT, NEW YORK, *February 14, 1851*

Both ether and chloroform are used as an æsthetic agents in the army.

I am, sir, very respectfully, your obedient servant,

JNO. W. CUYLER,
Surgeon U. S. Army

Hon. W. H. BISSELL, *Chairman, &c.*

ST. LOUIS, MO., *February 12, 1851*

Ether was first used by the army early in 1847, during the Mexican war, more particularly on General Scott's line; as at that period a complicated fragile inhalator was employed for its use. Of the number of instruments sent to the army, two intended for the Rio Grande line were broken in the transportation, hence the ether was little used, if at all, on that line. The chloroform was early introduced in the army, not soon enough to have had experience in its use, or chloric ether during the war. It is now one of the principal articles of medical supplies, and is in general use.

The chloroform is as highly esteemed by the medical officers of the army and navy as by the surgeons in general practice; it is certainly an inestimable boon to suffering humanity. To my knowledge no important surgical operation, including reduction of dislocations, fractures, &c., is performed in the army without its being employed.

I have the honor to be, very respectfully, your obedient servant,

E. H. ABADIE,
Assistant Surgeon U. S. Army

Hon. W. H. BISSELL, *Chairman, &c.*

FORT ADAMS, R. I., *February 10, 1851*

I have no doubt their effect is greatly to lessen mortality in surgical operations.

Most respectfully your obedient servant,

R. S. SATTERLEE,
Surgeon U. S. Army

Hon. W. H. BISSELL, *Chairman, &c.*

WEST POINT, N. Y., *February 12, 1851*

Says it was introduced into the Mexican war. "I shall consider it the greatest boon of the soldier."

"J. SIMONS,
"Ass't. Surg. U. S. Army."

ATHENS, GEORGIA, *February 9, 1851*

I reply, that in the navy of the United States, to my knowledge, both ether and chloroform are used as anæsthetic agents.

That the discovery is of American origin, and due to Dr. Morton, seems well established and believed that it is needless for me to add anything on my head. The memory of such a man should be written "*in æra perennes*;" it would reflect honor upon his country to reward his labors while living. Such a man can proudly exclaim with the immortal Tycho Borch, "I have not lived in vain."

A. A. FRANKLIN HILL,
Ass't. Surg. U. S. Army

NEW YORK, *January 3, 1852.*

I would state that sulphuric ether and tincture of chloroform are among the medical supplies furnished for the use of the army.

T. G. MOWER,
Surgeon U. S. Army.

NEW YORK, *January 31, 1852.*

Chloroform and sulphuric ether are, I believe, furnished generally to the army. * * * The effect of these agents is wonderful and most valuable in lessening pain and suffering.

ROBERT MURRAY,
Assistant Surgeon U. S. Army.

PHILADELPHIA, *January 27, 1852.*

And so far as my observation extends, (having witnessed a large number of most painful operations under the influence of ether,) I can but consider the discovery of the properties of these agents as the greatest boon that poor suffering humanity has ever received.

W. WHEATON.
Surgeon U. S. Army.

FORT WASHINGTON, *Indiana, January 27, 1852.*

Medical officers are supplied with chloroform for the use of the army. * * have used it myself.

LEWIS A. EDWARDS,
Surgeon U. S. Army.

GERMANTOWN, *January 26, 1852.*

Some of these agents are always added to the requisitions of medical surgeons

O. J. WEBSTER,
Assistant Surgeon U. S. Army.

FORT MOULTRIE,
Charleston Harbor, S. C., February 19, 1852.

Sulphuric ether was used in the general hospital at Vera Cruz, Mexico, in the summer of 1847. I had charge of that hospital.

J. B. PORTER, M. D.,
Surgeon U. S. Army.

PLATTSBURG BARRACKS, *New York.*

I have used ether, as before stated, for many years.

J. MAKLIN,
Assistant Surgeon U. S. Army.

JEFFERSON BARRACKS, *Missouri.*

C. A. Finley, surgeon United States army, uses it, and says: "As an alleviator of human suffering, I consider it the most important discovery that has been made since the days of Jenner."

FORT MEADE, *Florida.*

Jona. Letturman, assistant surgeon United States army, says he uses them in "diseases involving the nervous system, in allaying the vomiting of an irri-

table stomach, in cramp colic, and in *delirium tremens*. Its administration in all was followed by complete relief. In a case of *delirium tremens*, in which all the ordinary remedies were used without effect, I attribute the saving the patient's life to the administration of chloroform."

FORT SCOTT, *Missouri*.

Joseph K. Barnes, assistant surgeon United States army, says: "Both ether and chloroform have been, and continue to be, used as anæsthetic agents by myself and others in army practice. The use of chloroform, under my immediate notice, has been confined to its anæsthetic effects during surgical operations of some magnitude, in which freedom from pain on the part of the patient was considered conducive to safety and celerity in operating. No medical officer is likely to be without them."

FORT DODGE, *Iowa*.

Charles C. Keeney, assistant surgeon United States army, says: "Ether and chloroform are both used as anæsthetic agents in the army. They are used to a great extent in neuralgic diseases, and in amputations of the extremities, and extirpation of various tumors, all with remarkable good effect in annulling sensation and voluntary motion. Where I have been stationed they have been used to a great extent."

FORT RIPLEY, *Minnesota Territory*.

J. Frazier Head, assistant surgeon United States army, uses them, and says: "As in many important operations in surgery the nervous shock resulting from the pain experienced is an element of great importance in determining the issue of the case, an agent which removes this element with comparative safety, and no bad influence to counterbalance this advantage, cannot fail to diminish the mortality attendant upon such operations."

UNITED STATES NAVAL HOSPITAL,
Portsmouth, Virginia.

N. C. Barrabino, surgeon United States navy, says ether and chloroform is used both in the army and navy, and is decidedly of the opinion that their use lessens mortality.

FORT MCINTOSH, *Laredo, Texas*.

G. Pierce, assistant surgeon United States army, uses them, and says: "I am inclined to form a very high opinion of chloroform as a remedial agent."

FORT WEBSTER, *New Mexico, May 27, 1852*.

SIR: It gives me pleasure, in compliance with your request, to enclose to you the accompanying table. My experience in the larger amputations is, you will perceive, small, but favorable in the highest degree to the good effects of etherization. Wishing you success,

I am, very respectfully, your obedient servant,

WILLIAM A. HAMMOND,
Assistant Surgeon U. S. Army.

DR. W. T. G. MORTON, *Washington, D. C.*

FORT DUNCAN, *Texas*.

All my experience regarding anæsthetic agents has been in parturition, and I can assure you that the effect has always exceeded my most sanguine hopes.

GEORGE E. COOPER,
Assistant Surgeon U. S. Army.

BALTIMORE, *February 2, 1852.*

That the discovery of an agent which assuages or annihilates the severe pain often experienced in diseases, necessarily inflicted to a greater or less degree, in operations on the human body, and, generally, incident to the condition of the female in the act of parturition should, at the very first blush, commend itself to the acceptance of all mankind, and that the discoverer of such an agent should be regarded as having conferred the highest earthly boon on afflicted humanity, are propositions too obvious to need the slightest argument to enforce them.

Whether ether or chloroform is used in the army for anæsthetic purposes I have no means of knowing, but it is certainly so used in the practice of the navy.

I am, sir, respectfully, your obedient servant,

J. BEALE, M. D.,
Surgeon United States Navy.

Hon. W. H. BISSELL, *Chairman, &c.*

NAVAL RENDEZVOUS,
New York, February 7, 1852.

By most of the medical profession these agents are highly appreciated, and it is believed that Mr. Morton, who made public his discovery of the anæsthetic power of ether, is deserving a public reward.

I have the honor to be, very respectfully, your obedient servant,

D. S. EDWARDS,
Surgeon United States Navy.

Hon. W. H. BISSELL, *Chairman, &c.*

ERIE, *Pennsylvania, January 30, 1852.*

I should hold myself bound to use sometimes the one, sometimes the other, in various conditions of disease and injury.

WM. MAXWELL WOOD,
Surgeon United States Navy.

NORFOLK, *February 4, 1852.*

Chloroform or sulphuric ether are used in the naval service as an anæsthetic agent.

They are principally used in the naval service to lessen pain and enable a timid or excitable patient to undergo an operation.

JAMES CORNICK,
Surgeon United States Navy.

PHILADELPHIA.

That they are used in the army and navy. I think they diminish mortality.

DANIEL EGBERT,
Surgeon United States Navy.

PHILADELPHIA.

I have used chloroform as an anæsthetic agent in my practice in the navy.

J. HOPKINSON, *United States Navy.*

UNITED STATES SHIP PENNSYLVANIA,

Norfolk, Virginia.

D. B. Phillips, assistant surgeon United States navy, uses them, and speaks of them in the highest terms.

ANNAPOLIS, *Maryland.*

My experience has been, as yet, limited to some sixteen surgical cases. In preventing the sufferings of surgical operations, I consider chloric ether entitled to rank as the crowning medical discovery of the day. The cases in which I use it were for the removal of cancerous breasts and large tumors situated in delicate parts. I should strenuously recommend its introduction on board of our vessels of-war.

NINIAN PINKNEY,
Surgeon United States Navy.

UNITED STATES NAVAL HOSPITAL, *Chelsea.*

They are both used as anæsthetic agents in the navy.

S. RUDENSTEIN,
United States Navy.

UNITED STATES SHIP PENNSYLVANIA,
Norfolk, Virginia.

Chloroform is used in the navy. Its use has been confined to amputations and other painful and protracted surgical operations, and with decided benefit.

D. B. PHILLIPS,
Assistant Surgeon United States Navy.

PHILADELPHIA.

Ether and chloroform are both employed as anæsthetic agents in the United States navy. Diminish mortality in a very notable proportion.

JOHN O'CONNOR BARCLAY.
Passed Assistant Surgeon United States Navy.

UNITED STATES NAVY YARD,
Gosport, Virginia.

Samuel Barrington, surgeon United States navy, says they are used in the army and navy.

UNITED STATES STEAM FRIGATE SAN JACINTO,
Gosport, Virginia.

I have witnessed the use of ether and chloroform as anæsthetic agents in the navy. These agents have been very generally employed in a great variety of cases, and with favorable effect.

JOHN H. WRIGHT,
Passed Assistant Surgeon United States Navy.

UNITED STATES NAVAL RENDEZVOUS,
Boston, January 30, 1852.

I have seen chloroform used in the navy. * * * I would use it in surgical operations when it was desirable to prevent pain.

GEO. MALTSBY, *United States Navy.*

UNITED STATES MARINE HOSPITAL, *St. Louis.*

My impression is, that they are used in the army and navy to a considerable extent, my impression being derived from an acquaintance with many of the medical staff of those branches of the public service, from their publications in the medical journals of the country, and from their known disposition to be

pace with the progress of science. They are regarded as one of the greatest gifts that science could lay on the altar of humanity. They have now been used perhaps millions of persons, indiscriminately, in both hemispheres.

CHAS. A. POPE, *United States Navy.*

UNITED STATES MARINE HOSPITAL,
New Orleans, February 17, 1852.

As regards the use of anæsthetic agents, we have invariably employed chloroform in operations; also for perineal section, for stricture of the urethra, and minor surgery, without any unpleasant results, and, I think, with more favorable convalescence.

P. B. McKELVEY,
Principal Physician and Surgeon.

- Dr. J. H. Hopkinson, United States navy, uses chloroform.
 William Lowber, United States navy, says ether and chloroform are used.
 John H. Wright, passed assistant surgeon United States navy, uses them.
 D. B. Phillips, assistant surgeon United States navy, has used them.
 John L. Fox, surgeon United States naval hospital, Chelsea, says he has used them.
 John L. Burt, United States navy, United States naval hospital, New York, uses chloroform.
 George Blacknall, surgeon United States navy, Norfolk, Virginia, says they are used.
 William A. Nelson, M. D., United States navy, says it is used in the navy.
 D. S. Edwards, surgeon United States navy, says ether and chloroform are used in the navy.
 Charles S. Tripler, surgeon United States army, Fort Gratiot, Michigan, uses them.
 R. O. Wood, surgeon United States army, says it has been used in the army.
 A. S. Wotherspoon, assistant surgeon United States army—surgeon general's office—bears testimony to its high value.
 Josiah Simpson, assistant surgeon United States army, Fort Wood, New York harbor, uses ether.
 Dr. Macklin, assistant surgeon United States army, uses ether.
 L. D. Williams, Havre de Grace, says anæsthetic agents are used.
 Ebenezer Swift, surgeon United States, Fort Martin Scott, Texas, uses anæsthetic agents.
 Dr. J. N. Schoolfield, marine hospital, Norfolk, Virginia, uses anæsthetic agents.
 Dr. Henry S. Leveret, United States marine hospital, Mobile, uses anæsthetic agents.
 Dr. William Ingalls, United States marine hospital, Chelsea, Massachusetts, uses anæsthetic agents.
 Dr. M. L. Hewitt, United States marine hospital, Cleveland, Ohio, uses them.
 Alexander H. Hassier, Texas, assistant surgeon United States army, uses anæsthetic agents.
 Thomas H. Williams, assistant surgeon United States army, Fort North Texas, speaks highly of them.
 T. C. Madison, United States army, uses anæsthetic agents.

Extract of a letter from Henry I. Bowditch, physician of the Massachusetts General Hospital.

BOSTON, January 4, 1852.

I presume that the discovery of the anæsthetic properties of ether, and its practical application to medicine, will take a rank quite equal to that of vaccination.

To no one does the world owe so much for this practical application as to Dr. Morton. In fact, I am fully convinced that had it not been for the boldness of that gentleman the *world*, to the present hour, would have been ignorant of these peculiar adaptations of ether to alleviate human suffering. I say boldness *now*. In former times, however, I said *rashness*; for I believe I may say, without fear of contradiction, that the medical profession, as a body, would have feared death as the result from experiments such as are now made daily without the least fear. Dr. Morton has convinced us from error. Doubtless he received suggestions from other similar experiments made by several individuals, but to his indomitable perseverance do we *finally* owe all the essential good which the discoverer has bestowed on man.

I hope, therefore, that Dr. Morton will receive a tribute of respect from Congress that shall be commensurate with the great benefits that he has bestowed upon the nation.

I remain, very respectfully, yours,

HENRY I. BOWDITCH.

Hon. W. H. BISSELL.

Extract of a letter from Henry J. Bigelow, professor in Harvard University, and surgeon in Massachusetts General Hospital.

Boston, January 3, 1852.

I trust that Dr. Morton will now at last receive a substantial and liberal return for his discovery that ether can annul pain—1 with safety—with less risk, for example, than everybody daily encounters either in walking or riding; 2, with certainty in every case.

I have the honor to be, respectfully, your ob't servant,

HENRY J. BIGELOW.

W. H. BISSELL, *Chairman, &c.*

Extract of a letter from James Jackson, M. D., professor emeritus of theory and practice of physic in the University at Cambridge, honorary member of the Royal Medico-Chirurgical Society of London, &c.

Boston, January 5, 1852.

I have, nevertheless, watched the new use of ether and chloroform with great interest from the first annunciation of *this discovery by Dr. Morton*; and I will say, in general, that it would be difficult to exaggerate the benefits of these anæsthetic agents.

The great and undoubted benefits of ether are shown in surgical and obstetric practice; and I believe these are such as to entitle the discoverer of its good effects, when employed by inhalation, to a very large reward.

I am, sir, very respectfully, your obedient servant,

JAMES JACKSON.

Hon. W. H. BISSELL.

In a communication to the former committee of the House, Dr. Jackson says:

"In my opinion Dr. Morton is entitled to a grant from Congress, for the ether discovery, more than any and all other persons in the world."

Extract of a letter from Richard Girdler, M. D.

Boston, January 27, 1852.

I was present at those operations when ether was first administered at the hospital; saw its effects with admiration and astonishment, and am witness to

its successful application almost every day; and hope the committee will report favorably upon the just claims of Wm. T. G. Morton, who I believe is entitled to the merit of the discovery, and consequently should receive a fitting reward.

Very respectfully, sir, your obedient servant,

RICHARD GIRDLER,

Superintendent Massachusetts General Hospital.

Hon. W. H. BISSELL.

Extract of a letter from George Hayward, M. D., professor of Harvard University, and surgeon in Massachusetts General Hospital.

Boston, January 8, 1852.

I cannot close this letter without saying that I regard sulphuric ether, the agent first used by Dr. Morton, as by far the best anæsthetic agent; that I believe the world are indebted to him for its introduction into practice by proving by actual experiment, what was not before known or generally believed, that it could be inhaled with safety.

I certainly regard this discovery as one of the greatest of the age, and think that Dr. Morton is entitled to a liberal grant from our country for the benefit that he has conferred on the human race.

I am, with much respect, your obedient servant,

GEO. HAYWARD.

Hon. W. H. BISSELL.

Extract of a letter from Thomas P. Jackson.

Boston, February 4, 1852.

I consider the discovery and introduction of sulphuric ether as an anæsthetic agent to be second to no discovery in medical science, not even to the discovery of vaccination, and that we are solely indebted for its introduction by Dr. Wm. T. G. Morton.

My opinion is that no compensation Congress can confer on Dr. Morton will equal his deserts, and I really hope that for once a deserving man may receive his recompense during his life, instead of having a monument erected over his grave. I would say, in conclusion, that I have not the slightest acquaintance with Dr. Morton, and that I believe it is the general wish of the profession in this vicinity that Dr. Morton shall receive some remuneration for the benefits he has conferred on suffering humanity,

Yours, respectfully,

THOS. P. JACKSON, M. D.

Hon. Wm. H. BISSELL.

Extract of a letter from Dr. Putnam.

Boston, February 14, 1852.

In regard to the estimate in which I hold it, (ether,) I cannot perhaps give a more satisfactory proof than by stating that, immediately after my first experiments, I insisted on Dr. Morton's acceptance of a small sum of money in acknowledgment of my personal obligation to him, and as an earnest of what I considered to be his due from the whole community.

With great respect, I am yours,

CHAS. G. PUTNAM, M. D.

THE COMMITTEE.

Extract of a letter from Augustus A. Gould, M. D.

BOSTON, January 15, 1852.

I cannot but hope that Congress will do something noble in this case. Other nations have already bestowed honors and emoluments upon those they have deemed entitled in testimonial of their appreciation of this the greatest boon which has yet been granted to the keenest sufferings of mankind. And it is not seemly that our own nation should pass by in silence one of the greatest and most universally applicable discoveries which the world can boast of. The person or persons instrumental in bestowing it deserve substantial reward.

I have happened to know every step in the early introduction of the use of ether as an anæsthetic agent. And I am familiar with the odium, the denunciations, and the persecutions, and threatened persecutions, which were so liberally showered at its introduction. They came from honest men, whose experience had led them to apprehend serious danger. But with firmness of purpose, disregard of threats, and no lack or stint of expense, the demonstration was soon complete, and all rational opposition has long since been silent; and now it is not only a subject for national pride and national gratitude, but it commands and receives the gratitude of the world.

Very respectfully, your obedient servant,

AUGUSTUS A. GOULD.

Hon. W. H. BISSELL.

Extract of a letter from Albion S. Dudley, M. D.

BOSTON, February 3, 1852.

Dr. Morton certainly was the first in this city to *reveal* the anæsthetic effects of the sulphuric ether to the *public*, and successfully introduce it into the Massachusetts Medical College, to my certain knowledge.

I have the honor to be, yours, respectfully,

ALBION S. DUDLEY.

Hon. W. H. BISSELL.

Extract of a letter from A. L. Peirson, M. D.

SALEM, January 17, 1852.

I have toiled through five and thirty years of medical, and especially surgical, practice, in a dense population, during most of the time in conscious need of some pain-destroying remedy, and I hail the discovery of the application of the properties of ether with devout gratitude to a beneficent Creator, who has vouchsafed such a blessing to suffering humanity; and with sincere thankfulness to Dr. Morton as being the efficient and fortunate agent by whose means it has been placed in the hands of the medical profession. For although the inhalation of ether, to produce intoxication, may not have been a new idea previous to October, 1846, yet Dr. Morton at that time partially demonstrated its safety, utility, and applicability in making surgical operations painless, and was the procuring cause of its being now employed by all classes of medical practitioners in taking away that dread of human nature, pain.

I have the honor to subscribe myself, very respectfully,

A. L. PEIRSON.

Hon. W. H. BISSELL.

Letter from J. F. May, professor of surgery National Medical College, Washington.

WASHINGTON, February 10, 1862.

SIR: I have received your circular requesting of me an answer to the following inquiries:

- 1st. Is ether or chloroform used as an anæsthetic agent in your institution?
- 2d. If used, to what extent, in what classes of diseases, or of operations, and with what effect?
- 3d. What, in your opinion, is their effect in diminishing mortality?
- 4th. To what extent, in what classes of cases, and with what result are they used in private practice in your vicinity?
- 5th. In what appreciation are they held by the medical faculty within your knowledge?

I reply:

1st. Chloric ether is always used by me and my colleagues as an anæsthetic agent in every operation of any importance that is performed in the Washington Dispensary, of which institution I am one of the surgeons.

2d. For more than three years I have constantly used it, both in hospital and in private practice, and it has never in a single instance disappointed me in producing insensibility to pain, and I have never found its administration to be attended or followed by any serious result. I have given it at all ages, from the tender infant to the old and infirm man, and from a few moments to more than an hour at a time. I have performed under its influence many of the most important and capital operations of surgery, among which I may mention lithotomy, strangulated hernia, the removal of tumors from various regions, the different amputations of both the upper and lower extremities, from the removal of a finger to disarticulation of the hip joint, &c.

3d. I am perfectly convinced that the use of anæsthetic agents has greatly diminished the mortality of surgical operations, and I am prepared to say, further, that I would almost as soon think of amputating a limb without previously compressing its principal artery as to perform a difficult and dangerous operation without first putting the patient in an anæsthetic state. I consider, in fact, so important an element to the success of the surgeon in severe and formidable operations, by preventing all shock to the system, that I think he ought to decline any operation of magnitude and danger, should he meet with refusal on the part of the patient to be subjected to its influence. But fortunately there are few who are not only willing but anxious to be soothed by the magic spell which, to the victim, robs surgery of nearly all its terrors, and to the surgeon brings pleasure, from the knowledge that he inflicts no pain.

4th. I believe that all important surgical operations in private practice in this vicinity are performed under anæsthetic influence, and with the results that I have already mentioned.

5th. I believe that the medical faculty throughout the civilized world, where anæsthesia has been introduced, consider it to be one of the greatest boons that has ever been given to suffering man; and believing Dr. Morton to be its discoverer, trust he will receive from government a compensation commensurate with the immense benefit it has conferred upon the human race.

I have the honor to be, very respectfully, &c.,

JNO. FRED'K MAY.

Hon. W. H. BISSELL.

Extract of a letter from Alex. H. Stevens, M. D.

NEW YORK, January 5, 1852.

Without the slightest knowledge of Dr. Morton, or of any one connected, or claiming to be connected, with this discovery, and without assuming that he is mainly the discoverer, *which yet I believe*, I take leave to state that the claim of scientific discoverers to reward is a strong one.

The community is taxed by patent rights for inventions to the amount of many millions annually. The men of science paying themselves a part of these taxes, and bringing to light, by their unpaid labors, scientific discoveries from which these inventions in a great measure take their rise, are left entirely, in this country, without any reward whatsoever. In Europe they are rewarded besides that they are supported by salaries attached to their membership of scientific institutions.

In view of these considerations, and looking not only to what is just as between science and government, but what is, in a very high degree, and altogether beyond the appreciation of unlearned men, expedient, as respects the interest of the government, liberal rewards should be given for unpatented discoveries.

With very great respect, I am, very truly, your obedient servant,

ALEX. H. STEEVENS.

Hon. W. H. BISSELL.

P. S.—From an official connexion with the three great hospitals in this city embracing about 3,000 patients, I am enabled to state that anæsthetic agents are generally used in puerperal cases, in painful chronic diseases, in the reduction of fractures and dislocations, and in other capital surgical operations, many of which are rendered more successful, and not a few only practicable by their use. I consider it the greatest discovery in medicine since that of Jenner. It is to the healing art what steam navigation, electro-magnetism, and railroad travelling are to commercial and social communications.

A. H. S.

Extract of a letter from Hugh H. McGuire, M. D.

WINCHESTER, Virginia.

I regard the discovery of anæsthetic agents the most important discovery made in surgery for the last century. It is also entirely American; for although attempts have been made for a long time to destroy sensibility to surgical operations, no approximation was made to it until it was discovered, in Boston, that sulphuric ether would produce total insensibility. Now, it has been the practice in all enlightened countries to reward important discoveries in a very liberal manner, I do hope that an American Congress will not fail to follow the example. The use of these agents have become so common and general throughout Europe, that a late distinguished professor, of Philadelphia, during a visit to Europe, was constantly asked if it was possible any surgeons in America could be found opposed to them. I have no hesitation in stating that not only is pain avoided, but many lives saved by their use; for the nervous shock, in consequence of serious operations, not unfrequently ends in death. This is avoided by anæsthesia. * * * *

It would be just and proper to make him a liberal pension for it. It would not only be an incentive and stimulus to further discoveries in this extensive field of science, but redound to the credit of the government, here and abroad.

Very truly, your friend,

HUGH H. MCGUIRE,
Professor of Surgery.

Hon. CHAS. J. FAULKNER.

Jacob Rigelow, M. D., president of the Academy of Arts and Sciences, professor in Harvard University, and physician to Massachusetts General Hospital, in a letter to Hon. W. H. Bissell, says:

"It is considered by myself, and by the more intelligent part of my medical friends, as the most important medical discovery of the present age."

In an article published in the Medical and Surgical Journal of July 7, 1847, he says:

"In the case of Dr. Jackson, if he did make the discovery in 1842, as asserted, or even later, he stands accountable for the mass of human misery which he has permitted his fellow-creatures to undergo, from the time when he made his discovery to the time when Dr. Morton made his. In charity we prefer to believe that, up to the latter period, he had no definite notion of the real power of ether in surgery, having seen no case of its application in that science."

Letter from Professor Simpson, the discoverer of chloroform.

EDINBURGH, November 19, 1847.

MY DEAR SIR: I have much pleasure in offering, for your kind acceptance, the accompanying pamphlet. Since it was published, we have had various other operations performed here, equally successful. I have a note from Mr. Liston, telling me also of its perfect success in London. Its rapidity and depth are amazing.

In the Monthly Journal of Medical Science for September, I have a long article on etherization, vindicating your claims over those of Jackson.

Of course, the great thought is that of producing insensibility; and for that the world is, I think, indebted to you.

I read a paper lately to our society, showing that it was recommended by Liny, &c., in old times.

With very great esteem for you, allow me to subscribe myself,

Yours, very faithfully,

J. Y. SIMPSON.

Dr. W. T. G. MORTON.

Extract of a letter from J. Parkman, M. D., of Boston.

Life may also be saved from the more ready submission of the patients to necessary operations, since they can be assured that they are painless. And inasmuch as pain and spasm do destroy life, it is fair to presume that agents relieving these must diminish mortality.

In private practice in this city anæsthetic agents are in universal use in all surgical operations, and also in *all the operations of midwifery*. They are in the general use in all diseases requiring an antidote to pain and spasm, as one of the means to allay them, and some practitioners use them in all cases of childbirth.

I remain, very respectfully,

J. PARKMAN,

One of the Surgeons of the Mass. Gen. Hospital.

Hon. W. H. BISSELL.

Extract of a letter from S. D. Townsend, M. D., of Boston.

It has been used almost daily for diseases of a spasmodic and painful character, and in all surgical operations, with the effect of relieving pain and annihilating perfectly all suffering in surgical operations. I believe it diminishes

mortality, by relieving spasmodic diseases, and preventing the severe shock of surgical operations. In private practice it has been used to the same extent, and in the same classes of cases, and with the same result as occurring in the Massachusetts General Hospital, with the addition of cases of midwifery, in which it prevents the sensation of pain, without retarding delivery.

Very respectfully, your obedient servant,

S. D. TOWNSEND,

One of the Surgeons of the Mass. Gen. Hospital.

Extract of a letter from S. Mason Warren, M. D., of Boston.

Sulphuric ether and strong chloric ether are used at the Massachusetts General Hospital. Chloroform is not used.

The above substances are used in almost every surgical operation, and in many diseases attended with severe pain. I have seen them exhibited in more than two thousand cases, including hospital and private practice, and never with any bad result. By preventing the severe shock to the system in surgical operations, it is probable that they have an influence in diminishing mortality. In surgical operations in private practice, I have used the chloric and sulphuric ethers, principally the former; also in many obstetric cases, and to relieve suffering in painful diseases, often as a substitute for opium; and I believe them to be used by most other practitioners of Boston and the vicinity, for the same purposes, and with a satisfactory result.

Very respectfully, yours,

S. MASON WARREN,

One of the Surgeons of the Mass. Gen. Hospital.

Hon. W. H. BISSELL.

Extract of a letter from John Ware, M. D., of Boston.

Their most important use is in the practice of midwifery. They are employed very generally in severe, protracted, and dangerous cases. My belief is, from my own experience, and from the concurrent testimony of all practitioners with whose opinions I am conversant, that they not only diminish, and sometime annihilate, the suffering which is attendant on parturition, but that they lessen also the dread of it, which is so strong a feeling in the minds of females; and further that they render patients less liable to the subsequent ill effects of severe labors, especially those in which the use of instruments are necessary.

I have employed or seen them employed in asthma, in croup, in convulsions of children and adults, in neuralgia, in the spasmodic affections of fever, and in many other cases of a more indefinite character, into the description of which it is not now necessary to your purpose to enter. I have also employed them with signal advantage to alleviate the sufferings which occur toward the close of life, or in the act of death, in patients who have had irrecoverable diseases.

Their introduction is regarded by all practitioners within my circle of acquaintance, whose opinions I should regard as of value, as the most important discovery in practical medicine and surgery, which has been made since that of vaccination by Dr. Jenner.

I am, very respectfully, your obedient servant,

JOHN WARE.

Hon. W. H. BISSELL.

Extract of a letter from J. S. Jones, M. D., of Boston.

In the private practice in my vicinity the use of these anæsthetic agents is quite common in dentistry, in midwifery, and scarcely any operation of surgery

is performed without its use. The reduction of dislocations and the adaptation of fractured bones are materially aided by the effects of ether, besides the freedom from suffering enjoyed by the injured person when under its effects.

Respectfully, yours,

J. S. JONES.

Hon. W. H. BISSELL.

Extract of a letter from Z. B. Adams, M. D., of Boston.

It is almost uniformly used, both in public and private practice, in dentistry, in midwifery, and in all surgical operations; also to cause muscular relaxation in the reduction of hernia; has been eminently successful in cases of convulsions after delivery, and in alleviating the excruciating pain caused by the passage of calculi through the ureters. It is an exceedingly rare thing to hear of any dangerous or even serious effects from the use of either ether or chloroform. The good effects are almost incalculable.

Very respectfully, your obedient servant,

Z. B. ADAMS.

Hon. W. H. BISSELL.

Extract from a letter written by Dr. John Jeffries, physician to the Massachusetts General Hospital.

For my opinion of the benefits bestowed upon the world by Dr. Morton, please allow me to refer you to a note addressed by me to the Hon. R. C. Winthrop:

"Dr. Morton, who visits Washington to seek some remuneration from government for the benefit which he has conferred upon the country by the introduction of sulphuric ether, requests me to express to you my opinion (which I do most unreservedly) that the world is indebted entirely to Dr. Morton for the introduction of this agent to produce insensibility to pain, and that it is a physical blessing not second to any that has been conferred upon suffering humanity.

"I sincerely hope that Dr. Morton will receive some remuneration for his very great benefaction.

"With high respect, your obedient servant,

JOHN JEFFRIES.

"Hon. R. C. WINTHROP,

"Speaker of the House of Representatives."

Oliver W. Holmes, the distinguished poet, and a physician to the Massachusetts General Hospital, held the following language in an opening address of the Medical college, Boston:

"The knife is searching for disease, the pulleys are dragging back dislocated limbs, Nature herself is working out the primal curse, which doomed the tenderest of her creatures to the sharpest of her trials; but the fierce extremity of suffering has been steeped in the waters of forgetfulness, and the deepest furrow in the knotted brow of agony has been smoothed forever."

Again, in a communication to the Hon. Isaac E. Morse, he says:

"It is a notorious and wholly undisputed fact that Doctor Morton in person instituted the first decisive experiments, at the risk of his reputation, and with courage and perseverance, without which, even had the idea of the possibility of such effects been entertained, the world might have waited centuries or indefinitely before the result was reached.

"It is well known that Dr. Morton, instead of profiting by his discovery, has

suffered in mind, body and estate, in consequence of the time and toil he has consecrated to it.

"I have no particular relations with Dr. Morton, and no interest in common with him to bias me in my opinion and feelings. But, remembering what other countries have done for their public benefactors, and unwilling to believe that a rich and prosperous republic cannot afford and will not incline to indulge its gratitude whenever a proper occasion presents itself, I have addressed you this morn-
ing to tell you that I think now is the time, and this is the man.

"O. W. HOLMES.

"HON. ISAAC E. MORSE."

Extract of a letter from Geo. B. Loring, M. D., Salem, Mass.

It is one month since I had charge of the Marine Hospital, Chelsea, Massachusetts; and any statement based on personal experience must be founded upon my practice there.

In all operations, in all painful natural processes, in all diseases attended with great local suffering, the intelligent, and philanthropic physician avails himself of the great blessing. And while so much suffering is relieved, it cannot be doubted—in fact, it is satisfactorily proved—that mortality attending these operations, processes, and diseases, is materially diminished.

As the interrogatories addressed to me have grown out of an inquiry into the "claims of Wm. T. G. Morton, of Boston, to the merit of the discovery," it may be proper to state to the committee that its credit has been from the earliest date almost universally accorded to Dr. Morton by those of the profession who have given it their careful investigation. During its development, the surgeons and officers of the Massachusetts General Hospital examined its merits under the special guidance of Dr. Morton, and with a full recognition of his sole agency in the practical experiments which were leading to its establishment. And now that those events have passed into history, the histories of the hospital records as a fact fixed by all reliable testimony that Dr. Morton is the discoverer.

It should be borne in mind that this is the verdict of the immediate locality in which the discovery was made; and any recognition from abroad of Dr. Jackson's claims to it is no more than should be expected from the scientific world towards any pertinacious and untiring claimant holding his high position, be the claims true or false.

GEO. B. LORING.

Hon. W. H. BISSELL.

Extract from a letter written by Dr. Francis Boott, of London.

I was much interested in the discussion of the ether question, and entirely agree with you in your conclusion. I should say, as in the case of the yacht race, "*Morton is first, and Jackson nowhere.*" I am glad to find you are making a gallery of portraits of your benefactors and distinguished medical men, and Morton's should be among them. I still hope Congress will reward him.

Hon. H. W. BISSELL.

Extract of a letter from S. Paris, M. D., of Greensboro', Alabama.

The medical faculty appreciate it highly, and seem at a loss to know how they would practice without it, nor could a man be sustained by his medical brethren or the community who would refuse to use it. In fine, it is to the medical profession the greatest discovery of modern times, hardly excepting quinine.

Very respectfully,

S. PARIS.

Hon. W. H. BISSELL.

Extract of a letter from James Ayer, M. D., of Boston.

The cases in which they are more especially employed are in nearly all surgical operations where suffering is an attendant; in surgical diseases generally painful, and frequently protracted. They are also used in diseases of a spasmodic character, as cholera, cramps, colic, asthma, and in rheumatism and neuralgia. A great variety of cases in midwifery, as well as hysteria and convulsions, and many other painful diseases which might be added to this list, are very essentially relieved by these remedies.

Your obedient servant,

JAMES AYER.

Hon. W. H. BISSELL.

Extract of a letter from P. M. Crane, M. D., of East Boston.

In nearly all the operations of surgery which are likely to be attended with pain, either chloric ether, sulphuric ether, or chloroform, is used. So uniform is the belief in their utility that no surgeon at the present time would do without them. In obstetric practice they are also extensively used where cases occur requiring instrumental interference, but are not much employed in natural labor.

With much respect,

P. M. CRANE.

Hon. W. H. BISSELL.

Extract of a letter from John H. Dix, M. D., of Boston.

In all painful operations upon the globe of the eye and its appendages these agents afford incalculable relief, both physically and mentally. The severe operations upon the internal textures of the globe of the eye, not in themselves painful, but requiring for their satisfactory performance absolute immobility of the organ, these agents insure what, in young subjects especially, was heretofore only approximated to.

In the few operations of ophthalmic surgery which endanger life, I find from the use of these agents a diminished tendency to inflammatory action within the anium, and therefore less hazard to life. In aural surgery, though not frequently required, anæsthetic agents are of great value, chiefly in the removal of morbid growths from the external or internal ear. I believe that no other discovery in the whole range of medicine and surgery (with the exception, perhaps, of vaccination) has in the same time contributed so much to relieve suffering and prolong life.

Yours, respectfully,

JOHN H. DIX.

Hon. W. H. BISSELL.

Extract of a letter from John Appleton, M. D., West Newbury, Mass.

I have lately observed a good effect follow the inhalation of chloroform during paroxysm of severe suffering from dysmenorrhœa, in which relief was almost instantaneous.

It is, however, in obstetric practice that I have most frequently used these valuable agents, and I regard their usefulness in this relation as among the most valuable results of their discovery.

Respectfully, yours, &c.,

JOHN APPLETON.

Hon. W. H. BISSELL.

Extract of a letter from L. B. Morse, M. D., Boston, Mass.

They are used in most cases of important or capital surgery, in many cases of delirium tremens, tetanus, and similar neuralgic diseases, and in dental surgery also by some of our medical practitioners in common use in midwifery.

It diminishes mortality in three ways: 1st. In severe surgical operations, by entire relief from nervous excitability and reaction which attend them; 2d. By giving time for the use of the knife, and the careful completion of a dangerous operation, in the perfect quietude of the patient; 3d. The rest recured by some patients in certain neuralgic diseases which, if not attained, death is the result.

I am, sir, your obedient servant,

L. B. MORSE.

Hon. H. W. BISSELL.

Extract of a letter from L. H. Anderson, M. D., Sumterville, Ala.

I think anæsthetics diminish mortality in two ways: 1st. By preventing the shock of pain on the nervous system; 2d. By securing perfect immobility of the patient, and enabling the surgeon to operate more safely and exactly.

I am, very respectfully, your obedient servant,

L. H. ANDERSON, M. D.

Hon. W. H. BISSELL.

Extract of a letter from S. Blanding, M. D., Columbia, S. C.

Its use has induced patients to submit to the knife early; when otherwise they would have resulted fatally.

I consider it one of the most important discoveries of the age in mitigating human suffering, and often in saving life.

I have the honor to be, yours, &c.,

S. BLANDING.

Hon. W. H. BISSELL.

Extract of a letter from William Ellis, M. D., Oglethorpe, Ga.

It is my deliberate opinion, founded upon experience, that their effects diminishing mortality is more than fifty to one, for, if properly administered the effect is to take away all fear from the patient, and absolutely free the nervous system from irritation, and thereby prevent any interruption in the various organs in performing their functions naturally, and of course healthily.

In private practice its most happy and beneficial effects is in obstetrics nothing is or can be of so much value to a woman in labor in proportion to the difficulty attending labor; so is its benefits, and if in no other, in this class cases alone, it is the greatest discovery in any age of the world for the relief suffering humanity. Deprive me of its benefits, and I should almost, if altogether, abandon my profession.

WILLIAM ELLIS.

Hon. W. H. BISSELL.

B.

CLAIMS OF CONTESTANTS.—NITROTS OXIDE.

It generally happens in cases of great discovery, where the object has been much needed, long thought of, and long sought, that when discovery is at last made, and its truth and utility established, a host of claimants rise up and contest the prize, each asserting for himself precedence and priority. So it has been, and is in this case; but of several claimants, two only require the notice of your committee.

Doctor Horace Wells, already named in this report, was a surgeon dentist of the city of Hartford, and former partner of Dr. Morton, with whom he had parted some years before in kindness.

As soon as Dr. Morton had perfected his discovery, obtained the countenance and support of the medical hospital, and made up his mind to apply for a patent, he put himself in connexion with Dr. Wells, and the following letters passed between them:

"BOSTON, October 19, 1846.

"FRIEND WELLS—DEAR SIR: I write to inform you that I have discovered a preparation, by inhaling which a person is thrown into a sound sleep. The time required to produce sleep is only a few moments, and the time in which persons remain asleep can be regulated at pleasure. While in this state the severest surgical or dental operations may be performed, the patient not experiencing the slightest pain. I have perfected it, and am now about sending out agents to dispose of the right to use it. I will dispose of a right to an individual to use it in his own practice alone, or for a town, county or State. My object in writing you is to know if you would not like to visit New York and the other cities, and dispose of rights upon shares. I have used the compound in more than one hundred and sixty cases, in extracting teeth, and I have been invited to administer to patients in the Massachusetts General Hospital, and have succeeded in every case.

"The professors, Warren and Hayward, have given me certificates to this effect. I have administered it at the hospital, in the presence of the students and physicians—the room for operations being as full as possible. For further particulars I will refer you to extracts from the daily journals of this city, which I forward to you.

"Respectfully, yours,

"WM. T. G. MORTON."

"HARTFORD, Connecticut. October 20, 1846.

"DR. MORTON—DEAR SIR: Your letter dated yesterday is just received, and I hasten to answer it, for I fear you will adopt a method in disposing of your rights which will defeat your object. Before you make any arrangements whatever I wish to see you. I think I will be in Boston the first of next week—probably Monday night. If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will undoubtedly be a fortune to you, provided it is rightly managed.

"Yours, in haste,

"H. WELLS."

Two things in this correspondence are worthy of observation: 1st. Though Dr. Morton does not name *gas* in his letter, Doctor Wells assumes that the anæsthetic agent was "*gas*," and the "*effect*" of his compound, as stated by Dr. Morton in his letter, is precisely the same with that now claimed by Dr

Wells's friends for the nitrous oxide, as administered by him in the winter 1844-'5.

Hon. Mr. Dixon (now United States senator from Connecticut) testifies that having seen the correspondence published among Dr. Morton's papers, he applied to Dr. Wells for an explanation of it. That explanation will be found in the testimony of Mr. Dixon, and may be disposed of with the remark that it is evidently unsatisfactory on the face of it. The point for which that testimony is now referred to is simply to show that Dr. Wells admitted the genuineness of the correspondence, as hereinbefore quoted, from "A an examination of the question of anæsthesia, arising on the memorial of Charles Thomas Wells representative of Horace Wells," which your committee have carefully examined.

How, then, can the letter of Dr. Wells of October 20, 1846, be reconciled with the pretensions now put forth for him?

The letter of Dr. Morton, to which it is a reply, distinctly claims as his discovery (then recently made) the very fact which, on behalf of Dr. Wells, before quoted, is claimed to be the whole discovery, and the only discovery any worth or value, viz: the fact of the actual effective application of some one or more of a class of agents *to the purpose of producing insensibility to pain under surgical operations, with safety to the subject of them.*

According to the proposition on behalf of Wells, (*and his whole case depends absolutely upon its admission,*) the particular agent used is unimportant to the discovery—the discovery being the truth that such insensibility was produced by one or more agents of a class of agents. But it is simply the result—the fact of insensibility to pain—which Dr. Morton claims in that letter to have discovered as producible by *something* which he does not describe or disclose.

Can it be disputed that, this was a direct claim, advanced by Dr. Morton *Dr. Wells himself*, of the whole body of the discovery which is now claimed for Wells? And can it be doubted that if that discovery, or anything like it, was then the property of Wells, his reply must have referred to it, if it did not effectually guard his right?

Yet Dr. Wells says: "*If the operation of administering the gas is not attended with too much trouble, AND WILL PRODUCE THE EFFECT YOU STATE, it will undoubtedly be a fortune to you, provided it be rightly managed. Then why, it may be asked, if nitrous oxide, which is easily administered, produced precisely the same effect, was it not a fortune to Dr. Wells? No, certainly, for want of skill in the management of a discovery so as to make the most of it, for he fears Dr. Morton will adopt an injudicious method of disposing of his rights, against which Dr. Wells intimates he can guard him. And his conversation with R. H. Eddy, at the time of his visit to Boston, in keeping with the letter, and shows very clearly that he thought a patent ought to be applied for, whether the subject was practicable or not, and that sales of rights should be made pending the application for the patent.*"

This may be all well, but it did not prove him a novice in these matters. Mr. Eddy's statement is as follows:

"BOSTON, February 17, 1847.

"DEAR SIR: In reply to your note of this morning I have to state that, about the time I was engaged in preparing the papers for the procural of the patent in the United States on the discovery of Doctor Morton for preventing pain in surgical operations by the inhalation of the vapor of sulphuric ether, I was requested by Doctor Morton to call at his office to have an interview with the late Doctor Horace Wells, who was then on a visit to this city, and who, Doctor Morton thought, might be able to render him valuable advice and assistance in regard to the mode of disposing of privileges to use the discovery. Accordingly I had an interview with Doctor Wells. During such meeting, we conversed freely on the discovery and in relation to the experiments Doctor Wells had

been witness to in the office of Doctor Morton. The details of our conversation I do not recollect sufficiently to attempt to relate them, but the whole of it, and the manner of Doctor Wells at the time, led me, in no respect, to any suspicion what he (Doctor Wells) had ever before been aware of the then discovered effect of ether in annulling pain during a surgical operation. Doctor Wells doubted the ability of Doctor Morton to procure a patent, not on the ground that he (Doctor Morton) was not the first and original discoverer, but that he (Doctor Wells) believed the discovery was not a legal subject for a patent. He advised him, however, to make application for one, and to dispose of as many licenses as he could, while such application might be pending; in fact, to make as much money out of the discovery as he could while the excitement in regard to it might last. I must confess that when, some time afterwards, I heard of the pretensions of Doctor Wells to be considered the discoverer of the aforementioned effect of ether, I was struck with great surprise, for his whole conversation with me at the time of our interview led me to the belief that he fully and entirely recognized the discovery to have been made by Doctor Morton, or, at least, partly by him and partly by Doctor C. T. Jackson, as I then supposed.

"Respectfully yours,

"R. H. EDDY.

"R. H. DANA, Esq."

It seems evident here, at the very threshold, that Doctor Wells did not, on the 20th of October, 1846, believe himself to be the discoverer of *an available anæsthetic agent*. But on the 19th of April, 1847, after he has determined the title to discovery with Doctor Morton, he addressed the following letter to the Boston Post, in which he very greatly misrepresents the contents of Doctor Morton's letter to him, as any one will be satisfied on an inspection of the two papers, and on that misrepresentation rests the explanation of his reply:

"HARTFORD, April 19, 1847.

To the Editor of the Boston Post:

"I have just seen a long article in your paper of the 7th instant, signed 'E. W.' which I will answer in one word. The letter which is there introduced with my signature was written in answer to one which I received from Dr. Morton, who represented to me that he had discovered a 'compound,' the effects of which, as described by him, entirely eclipsed those produced by nitrous oxide gas, or sulphurate ether, he stating that his compound would invariably produce a sound sleep, the length of which was wholly optional with the operator; that he had not made a single failure in one hundred and sixty cases, &c., &c. He also stated that he had obtained a patent for this compound. I accordingly started for Boston to learn more of this improvement on my discovery, with which I had made him acquainted long before.

"While at his office I saw the so-called compound administered to a patient: it apparently had the same effect as the gas which I had many times administered for the same purpose. Before I left for home the gas was given to several other patients with but partial success—at least, so said the patients with whom I conversed. I then inquired about his patent, and found, to my surprise, that he had not obtained one, nor even made an application for one, this being done at a subsequent period, as the date of his specifications and patent clearly show. Respecting the interview which E. W. had with the Hon. James Dixon at Washington, I am informed by Mr. Dixon that the statement of E. W. in the article referred to is a gross misrepresentation of the truth, and, if necessary, he will sign a certificate to that effect.

"Respectfully,

"HOBACE WELLS."

Any one who shall compare these two letters will read Dr. Wells's statement of matters of fact with some grains of allowance.

The same departure from the line of straightforward, undisguised truth is found in his account of his discovery. He is not frank in his various communications as to the fact and mode. He states it as a conclusion drawn from reason and analogy, whereas it was a fact exhibited to his senses, and made the subject of conversation between himself and others at the time. He says:

"While reasoning from analogy, I was led to believe that the inhaling of an exhilarating gas, sufficient to cause a great nervous excitement, would so paralyze the system as to render it insensible to pain, or nearly so, for it is well known that when an individual is very much excited by passion he scarcely feels the severe wound which may at the time be inflicted, and the individual who is said to be 'dead drunk' may receive severe blows, apparently without the least pain, and when in this state is much more tenacious of life than when in the natural state. I accordingly resolved to try the experiment of inhaling an exhilarating gas myself for the purpose of having a tooth extracted. I then obtained some nitrous oxide gas, and requested Dr. J. M. Riggs to perform the operation at the moment when I should give the signal, resolving to have the tooth extracted before losing all consciousness. This experiment proved to be perfectly successful; it was attended with no pain whatever. I then performed the same operation on twelve or fifteen others with the same results."

The actual facts of the discovery, if discovery it is to be called, are detailed in the following statement filed as evidence by the representatives of Dr. Wells to support his claim:

"STATE OF CONNECTICUT,

County of Hartford.

"I, Samuel A. Cooley, a citizen of Hartford, county of Hartford, State of Connecticut, depose and say that on the evening of the 10th day of December, in the year 1844, that one G. Q. Colton gave a public exhibition in the Union Hall in the said city of Hartford, to show the effect produced upon the human system by the inhaling of nitrous oxide or laughing gas; and in accordance with the request of several gentlemen, the said Colton did give a private exhibition on the morning of December 11, 1844, at the said hall; and that the deponent then inhaled a portion of said nitrous oxide gas to ascertain its peculiar effect upon his system and that there were present at that time the said Colton, Horace Wells, C. I. Colton, Benjamin Moulton, and several other gentlemen, to the deponent at that time unknown; and that the said deponent, while under the influence of the said gas, did run against and throw down several of the settees in said hall, thereby throwing himself down, and causing several severe bruises upon his knees and other parts of his person; and that, after the peculiar influence of said gas had subsided, his friends then present asked if he had not injured himself, and then directed his attention to the acts which he had committed unconsciously while under the operation of said gas. He then found by examination that his knees were severely injured; and he then exposed his knees to those present, and found that the skin was severely abraded and broken; and that the deponent then remarked 'that he believed that a person might get into a fight with several persons and not know when he was hurt, so unconscious was a person of pain while under the influence of the said gas; and the said deponent further remarked 'that he believed that if a person could be restrained he could undergo a severe surgical operation without feeling any pain at the time.' Dr. Wells then remarked 'that he believed that a person could have a tooth extracted while under its influence, and not experience any pain;' and the said Wells further remarked 'that he had a wisdom tooth that troubled him exceedingly; and if the said G. Q. Colton would fill his bag with some of the gas, I would go up to his office and try the experiment,' which the said Colton did

and the said Wells, C. F. Colton, and G. Q. Colton, and your deponent, and others at this time unknown to said deponent, proceeded to the office of said Wells; and that said Wells there inhaled the gas, and a tooth was extracted by Dr. Riggs, a dentist then present; and that the said Wells, after the effect of the gas had subsided, exclaimed, 'A new era in tooth pulling.' "

"On the same point G. Howell Olmstead, of Hartford, says:

"In answer to your question I would state that I wish to render justice to all parties concerned. Having been connected in business with Dr. Wells, and being very intimate with him, we had a great many conversations together about the effect of the gas, and in those conversations he always told me he derived his first idea of the matter from remarks made by Dr. S. A. Cooley, at a private exhibition of laughing gas given at the Union Hall in this city, in the winter of 1844 or '45; and that, from those remarks, and what he witnessed himself, he immediately applied it to his own business."

Dr. Ellworth, of Hartford, when under examination, says, in answer to—

"Question 20. Why do you think I refer to that time?

"Answer. Because I suppose you know that Dr. Wells always claimed that he took his idea from knowing that a person might be bruised without knowing it; that he derived his knowledge of this fact either from seeing some one so bruised or hearing that such was the case at a public lecture in this city."

Dr. Riggs, of Hartford, an intimate friend of Dr. Wells, testifies, among other things, as follows:

"4. Question. Do you know Dr. S. A. Cooley?

"Answer. I know S. A. Cooley, who is called doctor from having been in a drug store.

"5. Question. Was Cooley in your office, or Dr. Wells's office, on the 11th of December, 1844?

"Answer. He was in Dr. Wells's office at that time; I think, without doubt, that is the date.

"6. Question. What other persons were present?

"Answer. Mr. Colton, who gave the gas and had a lecture at Union Hall, Hartford, the evening previous, myself, Dr. Wells, and I think two or three others whose names I do not recollect.

"7. Question. What time in the day was it they came to Dr. Wells's office?

"Answer. I think between ten and twelve o'clock a. m.

"8. Question. Did Dr. Wells, Cooley, and Colton, and the other persons, come to Dr. Wells's office together?

"Answer. I do not know; my impression is they came together.

"9. Question. Do you know from where they came at that time?

"Answer. I do not know; but they came with a bag of gas, and, as the gas was at Union Hall, I supposed they came from that place."

These witnesses corroborate the testimony of Cooley, and prove beyond controversy that Dr. Wells, instead of *reasoning from analogy* to come to the conclusion that a person on whom a wound was inflicted while under the excitement of exhilarating gas would be insensible to pain, *saw it and heard it announced* at the time when, and the place where, he got the idea, and, instead of consulting with Dr. Mercy, or any one else, as to the agent he should select, he had a bag filled with gas and moved off in company with Cooley and others who were with him at the private exhibition when the accident occurred, and had his tooth drawn under its influence. He then, as he says, performed the same operation on twelve or fifteen others with like success. The fact, as it existed, indicates more observation and promptitude, and less philosophical reflection, than that which he gives in his several papers. It is quite as creditable had it been frankly told.

But in either case there was here no discovery of any principle or fact in physiology. It was known from the earliest ages that a person in a state of

high mental exaltation, or when fully under the influence of stimulants or narcotics, may be wounded or surgically operated upon and feel no pain. Dr. Wells, therefore, gave nothing to science in proving to those around him that the immunity from pain which the gas afforded extended as well to the drawing of a tooth as to the bruising of a knee.

Had he pointed out and proved to the world a *safe, certain, and convenient* agent to produce such well-known results, he would have been indeed a benefactor to his country and mankind; but concede him all he claims, and to the full extent of all that his own narrative shows, he gave nothing to science nothing to mankind.

He operated on *twelve or fifteen* persons, and then went to Boston to test his discovery in the Medical College, in presence of its professors, a learned and enlightened body, well known to the scientific world. What he did there was not done in a corner. He failed. He had been treated kindly, had been allowed a fair trial, and returned home mortified and disappointed. He abandoned the enterprise. He certainly operated in no case after his return prior to the first of May, four months after, and did not *at that time* think the gas ought to be used in cases of dentistry. He says in his pamphlet of March 30, 1847 speaking of his unfortunate adventure in the Boston hospital:

"The excitement of the adventure immediately brought on illness, from which I did not recover for many months, being thus obliged to relinquish entirely my professional business."

The illness was "immediate," from the excitement of the adventure; the relinquishment of business "entire."

In the same pamphlet, page six, he says, in speaking of his conference with Dr. Warren: "In proof of this theory I related my experience in extracting teeth under the influence of nitrous oxide gas, stating that, with *one or two exceptions*, all on whom I had operated, numbering *twelve or fifteen*, assured me that they experienced no pain whatever." This would make from ten to thirteen successful cases. This argues very well with both the statement in conversation and the sworn testimony of the Hon. J. Dixon. In his conversation with Edward Warren, as sworn to by that witness, Mr. Dixon says: "As near as I can recollect, that, about two years before, he had heard that Dr. Wells was making some experiments with nitrous oxide gas to prevent pain in extracting teeth; that having a severe toothache, he called on him, proposing to take the gas, but that Dr. Wells informed him that, after giving it to thirteen or fourteen patients with only partial success, he had abandoned its use as dangerous, and dissuaded him from resorting to it."

Mr. Dixon himself, testifying as a witness, shows his memory to have been very exact; he says:

"I had repeated conversations with Riggs and Wells. Think both said that for so slight an operation as pulling teeth they would not advise its use, but that in severe surgical operations, as amputation, it should be used; but in slight operations it was not best to run the risk of using the gas. Wells said its use would entirely prevent pain, and he had extracted thirteen teeth with safety and without pain. These conversations were in May, 1845, and subsequent. Wells spoke of it as a recent discovery by him; said he had announced it to some of the Boston faculty. I think Jackson and Morton were mentioned by name, but am not positive. He spoke of an experiment before a class in Boston, in which he did not succeed as he had in Hartford, and the witness of his experiment discouraged him."

Twelve or fifteen cases he had tried, all except two, with success before he went to Boston in December, 1844, or January, 1845. He had succeeded in thirteen cases, in all, when he conversed with Mr. Dixon "in May 1845, *and subsequent*," and he thought the gas ought not to be used in *so slight an operation*

tion as pulling teeth. Entertaining that opinion, he, of course, would not use it, and there is no evidence and no assertion on his part that he did use it from the time of his visit to Boston until Doctor Morton's discovery was promulgated and attracted the attention of the world. Nor was it for the want of sufficient opportunity to get the attention of the medical faculty, or for the want of health to pursue his investigations; on the contrary, in a letter to Doctor Morton dated July 31, 1845, we find him establishing himself in the practice of his profession in the city of New York, in the midst of hospitals and surgeons. The letter referred to is as follows:

"NEW YORK, July 31, 1845.

"FRIEND MORTON: You will see by the date of this letter that I am at present in New York. I came here about two weeks since for the purpose of starting a business to do plate work."

In his letter of February 17, 1847, he says:

"Since this discovery was first made I have administered nitrous oxide gas and the vapor of ether to about fifty patients, my operations having been limited to this small number in consequence of a protracted illness which immediately ensued on my return home from Boston in January, 1845."

So that in a little more than two years, from December, 1844, to February, 1847, he had administered to about fifty patients, and no more, for he seems well aware that the small number of cases will be marked against him, and he accordingly apologizes. Take the very loose testimony of the witnesses examined in behalf of his representatives without this connexion, and we would be led to conclude that he had operated on more than one-fourth of that number in a single day.

Doctor Wells was afraid to administer the nitrous oxide without the "co-operation of the medical faculty." But they would not co-operate. Of them he says: "*All were fearful of doing some serious injury with it.*" That is true. So they were, and so they would be now, if its use were again proposed. The medical faculty are, as a body, *cautious*, but not *timid*. They were afraid to use nitrous oxide lest they should do serious injury with it; but they were not afraid to use sulphuric ether when its anæsthetic qualities were made known to them. They received the announcement of its discovery with shouts of exultation; there was an end of *pain*, and an end of *mesmerism* as a pain-subduing agent; and it was at once received into universal use by the medical faculty. And the witnesses speak of it as a thing understood that Doctor Wells ceased his experiments and gave up the pursuit until after the time the discovery of Doctor Morton had obtained universal use and celebrity. Doctor Ellsworth, speaking of his failure in Boston, in the winters of 1844-'45, says:

"He presented it to Doctor Warren, who laid it before his class, but the experiment first attempted partially failing, and no one seeming willing to lend him a helping hand, he ceased making any further personal efforts."

Every scintilla of testimony which has application on or about this time implies total abandonment. Geo. Brinley, of Hartford, being interrogated, says:

"Question. Did you say, in the presence of Doctor Wells, that the individual who discovered this idea was stupid that he did not pursue it?"

"Answer. I said it to him."

"Question. What did he say?"

"Answer. I did not know him at the time, and begged his pardon. He said he would forgive me, as he saw I was his friend; that he was *stupid*, or a *jack-ass*, that he had not pursued it."

Howell Olmstead, jr., of Hartford, who was engaged in disposing of the rights of sale for the patent shower-baths of Dr. Wells, says :

"I considered that he had abandoned the thing entirely, as he expressed himself to me; that the operation in some cases proved a perfect failure, and spoke of his unsuccessful trial in Boston in 1845. He expressed himself as being very sorry that he had not prosecuted his experiments to a successful termination; and he also regretted stopping the matter where he did; for he thought an immense fortune might be made of the business, and that the discovery would reflect great honor upon the discoverer."

The opinions of Drs. Wells and Riggs as to the impolicy of using nitrous oxide in cases of dentistry seems to have been that also of the profession in Hartford. But a very few cases could be proven of its use between January, 1845, and September, 1846, in the whole city of Hartford, although the persons thus operated upon during this period of nearly twenty months were called on by newspaper advertisements to appear and give their names to Doctor Ellsworth.—(Hartford Daily Times, November 24, 1852.) It had had its day and was abandoned, to be revived again and live for another brief day after the publication of Doctor Morton's successful experiments with sulphuric ether. Doctor Cooley, of Hartford, in answer to inquiries made of him by Doctor Morton as to the statement which he had given in behalf of Mrs. Wells, above referred to and partly set out, in answer to the inquiry, "you say, moreover, that you administered, when requested to do so by surgeons and dentists. 8th. Was this not subsequent to the ether discovery?" He says:

"Answer 8. Yes; it was after the ether discovery, in 1846, that I administered the gas for surgeons and dentists; that then being an attempt by us all to renew the experiments, as the public and ourselves had lost confidence, and doubted the practicability of the thing, until the successful introduction of ether. I administered gas for Dr. Ellsworth, an intimate friend of Wells, and also to several others; but the last time that I exhibited it was to a lady at Dr. Greenleaf's office, which, in a great measure, proved a failure, and then ether and chloroform assumed the place of the gas, and operations were more successful in the use of them; and since then I have had but little to do with the matter, as other business has taken up my time and attention.

"Answer 9. I knew of Dr. Wells going to Boston soon after the noise in the papers of the discovery of the effects of ether by you in 1846, and had a conversation with him on his return about your discovery. He made no claim to me of the discovery being his, but, on the contrary, expressed regrets that we had not continued our experiments to a successful termination."

Now, if all that Dr. Wells claimed, and all that his friends claim for him and for themselves, to have been done by him and them down to the time of his visit to Boston in January, 1847, be true, there was no discovery of a *safe, certain, and convenient* anæsthetic agent such as the world at large could and would adopt—none that would be useful to the people and to the army and to the navy of the United States, nor was such discovery at all advanced. Nothing more seems to have been done than to satisfy the profession that nitrous oxide gas would not do as an anæsthetic agent, and to prevent further experiments in that quarter. Dr. Wells's thirteen experiments were made among friends, bold, hardy young men, and, of course, each person operated upon would take a share, however small, of the glory. The operation was performed *gratis*, and with "mental preparation;" hence its success. But when a stranger was the subject; when the domestic and social influence were gone, in the great world, in the public hospital, the experiment failed, and its failure opened the eyes of Dr. Wells to the fallacy of his former apparent success, by which he and those with whom he operated upon were alike deceived. They were naturally the dupes

each other and of themselves, and Dr. Wells, being at last undeceived, immediately did what he could to dispel the illusion. He declared his disappointment and mistake. The gas did not operate as he expected. He quit its use, and Dr. Riggs advised their patients against it. While he had faith he entered into an arrangement with Dr. Cooley, of Hartford, to carry on the business in partnership extensively, and Cooley, in speaking of it, says:

"The first intimation I had that Dr. Wells did not intend to carry out our partnership arrangement with me was when he informed me, several weeks after the arrangement was entered into between us, that he had just returned from Boston, where he had made a public experiment, which had proved a failure. He then said to me that he was disappointed in the effects of the gas, and that would not operate as we had hoped and thought it would, as there was no certainty to be placed upon it, and, consequently, he should abandon it, as he had so much other business to attend to, and as the gas would not operate in cases alike, and therefore could not be trusted. He advised me to go on with my exhibitions, and thought I could make money out of them, and that, though he had got through with his experiments in the business, he would assist me in any way he could in order that I might succeed in my lectures, and suggested to me to connect with my lectures and administering the gas mesmerism, and the use of a card of questions which he had prepared, so arranged that correct answer could be given by a person in an adjoining room as to the time day, &c., by the particular manner in which the question was asked. Feeling no confidence that by following his suggestions I should realize sufficient in the lectures to reimburse me for my time and expenses while in company with him, the matter was then dropped between us, and I pursued my lectures."

Thus warning him to leave off experiments which, if pushed to the point of excess, must be dangerous to life, and go on and amuse and humbug the people in a manner that would be pleasant, and by means not at all dangerous, Dr. Wells, in his papers, after the success of sulphuric ether, professes to have ceased and considered its qualities before commencing his experiments, and even in its stead the nitrous oxide gas. We have seen that in this he was mistaken. He was led on to his experiments by a course of events in which philosophical induction, analysis, and comparison could not have intervened. Marcy testifies to the same thing, but his evidence is met by the same obvious fact.

But it is now said that Dr. Wells did once use the vapor of sulphuric ether, I extracted a tooth from J. Gaylord Wells while under its influence. Dr. Wells does not say so, nor is the assumption consistent with his statements. It is solely on the testimony of Gaylord Wells, and a special deposition is taken a late day to establish it. In March, 1847, he testifies as follows:

"HARTFORD, March 26, 1847.

"I hereby testify that more than two years prior to this date, on being informed that Horace Wells, dentist, of this city, had made a valuable discovery, which means he could extract teeth without pain to the patient, which consisted in the use of stimulating gas, or vapor, I inhaled the exhilarating gas, and, for its influence, had six extracted without the least pain. I would further state that for more than eighteen months from the time I first submitted to this operation by the application of gas I heard no other name mentioned as the discoverer except that of the above-named Horace Wells.

"J. GAYLORD WELLS, 184½ Main street."

Six teeth extracted, *all* under the influence of *exhilarating gas*—nothing of sulphuric ether.

P. C. Goodrich was present when Gaylord's teeth were extracted. He testifies in answer to interrogatories:

"Question. Have you any personal knowledge that Dr. Wells ever made use of ether as an anæsthetic agent in any surgical or dental operation ?

"Answer. No.

"Question. Have you any personal knowledge that ether was ever used by any person, in any such operation, before the fall of 1846 ?

"Answer. I have not.

"Question. Have you ever seen Dr. Wells extract any other tooth, under the influence of nitrous oxide, than your own ? if yea, who and when ?

"Answer. I have ; I saw him extract several for J. Gaylord Wells, and one for Wm. H. Burleigh ; Wells's were all extracted at one time, soon after mine was extracted, and Burleigh's soon after ; I should think within a week after mine was extracted.

"Question. Did you ever know or hear that Dr. Wells extracted any teeth under the influence of any anæsthetic agent, after his return from Boston, January, 1845, and before October 1, 1846 ?

"Ans. I don't know that I did."

Dr. Riggs says that Gaylord Wells was one among the first to whom the gas was administered, (answer to 29th interrogatory.)

Gaylord Wells's deposition was again taken to prove that his teeth were all drawn at once, but at *several* times, and no more than *two* teeth at a time, and that sulphuric ether was used at one of those times ; "*whereupon, finding disagreeable, he advised his friends not to use it, but continue the gas.*" The witness, and the parties who suffered him thus to testify, could not have looked to his first affidavit before he swore to the second.

In his first he says : "*I inhaled the exhilarating gas, and, under its influence had six extracted without the least pain.*"

In the last he says that only *five* were with the gas, and *one* with sulphuric ether ; *the ether was not given from the bag, "but some different apparatus."*

This witness contradicts himself. He is contradicted by his companion, C. Goodrich. He pretends to state an important fact, not hinted at by Dr. Wells in his lifetime, and which is against the whole current of the evidence. In the pamphlet of Dr. Wells, already referred to, he says : "*I have confined myself to the use of nitrous oxide gas, because I became fully satisfied, from the first, that it was less injurious to the system than ether.*"

He says, however, that *Dr. Marcy tried ether in one surgical operation*, and thereupon advised him by all means to continue the use of the nitrous oxide gas. Dr. Wells says that, after and upon consultation, he determined to continue the use of the gas ; but he does not say it was, or after an experiment upon Mr. Gaylord Wells, or that he was of those with whom he advised.

We leave the testimony of this witness to the consideration of the Senate.

On the 17th of February, 1847, Dr. Wells made a publication in *Galignani's Messenger*, in which, speaking of nitrous oxide, and the vapor of sulphuric ether, he says : "*The less atmospheric air admitted into the lungs with a gas or vapor, the better.*"

It is not to be believed that at this time he had ever administered the vapor of sulphuric ether ; that vapor will not support respiration, and a patient could no longer inhale it, without a mixture of atmospheric air, than he could live with his head under water. It takes about three minutes to produce the effect of anæsthesia with ethereal vapor, which, administered according to Dr. Wells's direction, without atmospheric air, would, in most cases, destroy life. But if it had been true that Dr. Wells used ether with success, it was a matter of no importance, the physicians and surgeons of his own town never knew no mark of pen or pencil attested it till long after Dr. Morton's discovery, years after Gaylord Wells's affidavit gave it to the world. Drs. Wells, Riggs, and Marcy say they consulted about the use of sulphuric ether and condemned it. Drs. Wells and Riggs at once, and Dr. Marcy after a trial.

jected it, or abandoned its use on trial. It is immaterial whether Dr. Marcy, in fact, tried it or not; but is he not mistaken in supposing he tried it? No trace of the patient, on whom the experiment was tried, can be found. One hundred dollars reward has been offered, but yet he cannot be found. Dr. Marcy cannot give his name, or any account of him, except that he operated upon him while under the influence of sulphuric ether. He made no contemporaneous entry, wrote no contemporaneous letter, which can be vouched to prove his most important experiment; and more than this, Dr. Marcy has not always testified cautiously. The close of his affidavit of December 1, 1849, may be taken as an example; he says:

"I also further declare that I was aware of the fact of Dr. Wells's visit to Boston, in 1844, for the purpose of communicating his discovery to the faculty of that city. I also had an interview with Dr. Wells soon after his return from Boston, when he informed me that he had made known to Dr. C. T. Jackson and Dr. Morton, the anæsthetic properties of the nitrous oxide gas, the ether vapor, and other analogous substances. He also informed me that he had made an imperfect trial with the gas before Dr. Warren's class, but that the experiment was not satisfactory on account of the patient's getting an insufficient quantity of the gas. He further informed me that his discovery and his whole idea respecting anæsthetic agents was ridiculed by Dr. Jackson and other medical men of Boston, but that his former pupil, Morton, swallowed this ridiculous idea greedily and kept it down until 1846, when he ejected it at Washington in the form of a patented compound—mark the word—compound, called Lethæon."

Now, it is very certain, even if Dr. Wells were in the habit of using language so coarse and absurd, which does not seem to be the case, that he did not say, on his return home from Boston in the spring of 1845, what Dr. Marcy testifies he then said of Dr. Morton doing in 1846. Suppose it all to be about to happen just so, Dr. Wells could not have known it and denounced it to Dr. Morton a year before it took place.

"It is upon Dr. Marcy principally that the Wells claim seeks to support itself. It must be conceded that he, Marcy, knew from Wells all that Wells knew or suspected. Wells himself, in his publication of 1847, vouches Dr. Marcy as the person with whom he 'advised' and 'discussed the comparative merits of nitrous oxide gas and rectified sulphuric ether.'

"It is important, then, to see, if possible, to what conclusions Wells's experiments and discoveries had brought Dr. Marcy. This gentleman, in his deposition of 1849, (Wells's pamphlets, 1852, p. 31,) declares that, 'in the month of October, 1844,' (which is two months prior to the first notion of Wells on this subject,) he 'witnessed the extraction of a tooth from the person of T. C. Goodrich, esq., of this city, (Hartford,) by Dr. Horace Wells, after nitrous oxide gas had been inhaled, and without the slightest consciousness of pain on the part of the gentleman operated upon. Not only was the extraction accomplished without pain, but the inhalation of the gas was effected without any of those indications of excitement or attempts at muscular exertion which so commonly obtain when the gas is administered without a definite object or previous mental preparation. By this experiment two important, and, to myself, entirely new facts were demonstrated: 1st. That the body could be rendered insensible to pain by the inhalation of a gas or vapor capable of producing certain effects upon the organism; and 2d. When such agents were administered to a sufficient extent, for a definite object, and with a suitable impression being previously produced upon the mind, that no unusual mental excitement, or attempt at physical effort, could follow the inhalation.'

"It is impossible to read Dr. Marcy's statement of these 'two new facts' without being reminded of Cooley's testimony with regard to mesmerism. It is apparent that the second and important fact which Dr. Marcy deduced from the

experiment of Dr. Wells, viz: that the insensibility to pain would be attended by such a condition of the patient as would make it possible to subject him to a surgical operation, hinged upon two independent and fanciful perquisites, viz: that the gas should be 'administered for a definite object,' and that the patient should have 'a suitable impression previously produced upon the mind.'

"Again he says, in an article published in the *Journal of Commerce*, on the 30th day of December, 1846: 'Another fact in relation to the exhilarating gas &c., is worthy of notice. Under ordinary circumstances, the person who inhales the gas has no control over himself, but if, previous to his taking the gas, he fixes his mind strongly upon some given purpose, and exercises his will steadily in order to effect and carry out this purpose, he will, in nearly every instance remain quiet.'

Wells, in his publication dated Paris, February 17, 1847, *Boston Atlas*, says

"Much depends on the state of mind of the patient during the inhalation of gas or vapor. If the individual takes it with a determination to submit to a surgical operation, he has no disposition to exert the muscular system, whereas, under other circumstances, it seems impossible to restrain him from over exertion; he becomes perfectly uncontrollable. It is well to instruct all patients of this fact before the inhalation takes place."

This is sheer charlatanism. A discovery which depends for its efficacy upon the concurrence of two fools, one to administer and the other to be administered upon—leaving everything to the effect of imagination—is only entitled to the attention of such as are fit to be operators or patients under that system and the number of these, it is hoped, is small.

But how is it possible that these mental pre-occupations of operator and patient should have been adopted by Dr. Marcy as necessary conditions to the success of Dr. Wells's discovery, if that discovery was understood by Marcy at that time, as identical with or equivalent to the discovery made by the undersigned? The latter is purely physical in its operation. It does not differ in this respect from any other fact or theory in the *materia medica*. The former essentially depends upon the imagination; and, fortunately for humanity, must have but a rare and doubtful operation. It is nevertheless a fact, not now to be disputed, that the manipulations of the mesmerizer have reduced patients (and more than the twelve or fifteen, claimed by Wells) to the condition which Dr. Marcy proposes in his second specification of 'important and new facts.'

It is not to be wondered at, then, that these gentlemen, Drs. Marcy and Ellsworth, should concur with Wells in the opinion that the operation was uncertain and could not be trusted, and practically abandoned all idea, if such was ever entertained by them, of making it a useful agent in surgery. In fact, it does not appear that either of them performed any operation with its aid until after the discovery by the undersigned; at all events not between that time and the early experiments which we have seen had resulted so as to induce Wells himself to abandon the subject. After the discovery by the undersigned had been fully tested and established, it was easy enough to reason themselves into the belief that it was all embraced in that which they participated in, but which had been without the slightest profit to the world at large, or any practical advance towards this great boon to humanity.

It is true that Dr. Marcy states that he performed an operation with ether soon after Wells's first experiments with the nitrous oxide; but it is, by no means clear that such was the fact; and if the fact, it can hardly be doubted that the experiment was a failure. When the idea occurred to Wells, in the face of his letter of October, 1846, to Dr. Morton, to claim that he had made the same, or an equivalent discovery in 1844; and when Drs. Marcy and Ellsworth came to his aid, it is not possible that the fact that ether itself had been used and that "the operation was entirely unattended with pain," if such a fact existed

ould not have instantly occurred to them as most material to his claim, and that the facts and particulars, with clear proof thereof, should not have been instantly produced. Yet there are two publications, by Dr. Marcy himself, denuding Wells's claim—one on the 30th December, 1846, and the other on the 5th of January, 1847, both in the *Journal of Commerce*, in which the material fact, although directly pertinent to the precise purpose of the publications, is not even alluded to. In both of these publications he limits himself to the statement that he, Marcy, had suggested the use of ether to Wells; but that, "upon reflection and more full discussion," he had advised that the exhilarating gas was preferable. On the 27th of March, 1847, (Wells's pamphlet, Hartford, J. Gaylard Wells, 1847, p. 20,) he makes his third publication, (p. 132.) and verifies the same by affidavit, wherein, after reiterating that ether had been discussed, and that he had advised against its use, he, for the first time, states the following fact: "I also take this occasion to assert from my positive knowledge that the ether vapor was administered very soon after this period, (and prior to 1845,) for the performance of a surgical operation."

This is all he says of it. He does not intimate that he performed the operation; but, on the contrary, states that he had steadily advised against its use. Nor does he state what the operation was, nor what success attended it. It was reserved for his fourth statement, made five years after the operation, (1849,) to disclose the fact that he himself performed the operation upon "the young man above alluded to," and that it was the cutting "from his head an encysted tumor about the size of an English walnut, and that the operation was entirely unattended with pain; and demonstrated to Dr. Wells and myself, in the most conclusive manner, the anæsthetic properties of ether vapor." Still, there is nothing stated to enable any information to be obtained touching this important operation beyond what Dr. Marcy himself chooses to communicate. Wells thus refers to it: "Let it be observed, however, that at this time, (November, 1844,) while we had the subject under consideration, a surgical operation was performed at Dr. Marcy's office under the influence of sulphuric ether, as is proved by affidavit. The doctor then advised me by all means to continue the use of nitrous oxide gas." And yet, in 1849, it is pretended that the operation was entirely successful, and ought therefore to have led, "by all means," to the contrary advice! Testimony like this cannot be expected to produce conviction.

As to the alleged operation no one has ever been able to hear of it, except through Dr. Marcy. Anxious to prove the matter, Dr. Morton offered a reward of one hundred dollars, in Hartford, to any one who could tell the name of the patient, or give him any means to find him. On this point, he refers to the statement of Mr. Cornwall, his counsel there. The failure to produce, indicate, or in any degree describe "the young man," under these circumstances, is entirely consistent with any view of Dr. Marcy's evidence.

The facts connected with Wells's own conduct and publications in this matter are worthy of attention in this connexion.

After his remarkable letter of October, 1846, and when the discovery of Dr. Morton's had assumed its full magnitude and importance, Wells first appears as a claimant before the public on the 7th of December, 1846, in the *Hartford Courant*, two years after his pretended discovery, and limits his pretensions to having had a tooth drawn himself, and afterwards having performed similar operations for twelve or fifteen others under the influence of nitrous oxide. No allusion is made to any experiment with ether, or to any subsequent use of nitrous oxide; but his whole career is there summed up with his failure at Boston, in 1845. His letter to Dr. Morton, of October, 1846, shows his appreciation of the advantages that would belong to the discoverer. He says: "If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will undoubtedly be a fortune to you, provided it is rightly managed." After publishing his letter of the 7th of December, he proceeds to

Europe upon a speculation in pictures. Arriving in Paris, he finds the whole scientific world agitated with this subject. He makes no claims. It is not till after Dr. Brewster, of Paris, reads the publication by Marcy and Ellsworth taken from the Journal of Commerce, and sends to him, Wells, "begging him to call on him (Brewster) and tell him if he is the true man," that he is stimulated to make the publication in Galignani's Messenger, which is copied in the Boston Atlas.—(Letter of Brewster dated 24th of March, 1847.) In this publication, his experiments, theretofore stated to have been with nitrous oxide alone, are claimed to have been with ether also. He is entirely unprepared with an proof. Dr. Brewster, to the New York Journal of Commerce, says: "Imagine to yourselves, Messrs. Editors, a man to have made this more than brilliant discovery and visiting Europe without bringing with him his proof." Again, Brewster (letter to Morton, dated 21st of March, 1847,) says: "Dr. Wells's visit to Europe had no connexion with this discovery; and it was only after I had seen the letter of Drs. Ellsworth and Marcy that I prevailed upon him to present his claims to the Academy of Sciences," &c.

He sailed for Europe upon his picture speculations in December—is in Paris engaged in that business until Brewster, acting on the faith of Marcy's and Ellsworth's publication, urges him to put forth his claim. He then publishes at Paris.

The publications and affidavits of Ellsworth, Marcy, and Riggs, have, on every successive occasion, expanded themselves greatly.

Equally remarkable and inconsistent with fact is the following preface in the publication made at Paris: "The less atmospheric air is admitted into the lungs with any gas or vapor, the better—the more satisfactory will be the result of the operation."

When it is known that the administration of ether in sufficient quantity produces total insensibility without atmospheric air occasions certain death, what credit is it possible to give to the assertion of fact made in this publication by Wells, for the first time, that he had used the ether at all, or knew anything of its properties in this respect.

The testimony of the physicians and surgeons of Hartford and its neighborhood, examined by the United States commissioner under the proceeding before referred to, sufficiently shows that even within that limited district the alleged discovery of Wells was not practically regarded as of any value. This is consistent with the judgment which Wells himself pronounced on it after his return from Boston; but is wholly inconsistent with the fact now put on it by Dr. Marcy and Ellsworth, the only two who go beyond mere rumor and hearsay.

But if Dr. Marcy did make use of the vapor of sulphuric ether as an anæsthetic agent in the removal of a tumor, the fact was of no value to mankind. He did not make it public. The profession at large knew nothing of it; and those to whom he made known the fact, he depreciated and discouraged its use. What he did and said would induce no one to push his discoveries in that direction, but rather tend to discourage it and direct their experiments to nitrous oxide. Such, Dr. Wells says, was his advice to him.

Dr. Ellsworth used it in surgery in two cases after the contest with sulphuric ether waxed hot. He cannot fix the date of the first case, but Dr. Cooley, who administered the gas, being interrogated thus:

"You go on to say that you administered nitrous oxide gas to several individuals who underwent severe surgical operations without pain. Was not all these subsequent to the discovery of the anæsthetic properties of ether in 1846?"

"Answer. (In a letter to Dr. Morton.) I did not exhibit the nitrous oxide for the purpose of producing insensibility to pain until subsequent to the alleged discovery of the anæsthetic properties of ether by you in 1846."

The amputation of the thigh of the boy Goodale was January 1, 1848, when

the contest between gas and ether was at its hottest. Dr. Ellsworth says it was without pain. The boy says it was very painful; but it is not important whether it was or was not painful. If the boy had been made dumb or stupefied with opium he would have felt no pain from the operation. If he had been fully stupefied by the gas he would not have felt pain; but it is probable that neither of these carried to that extent would have been safe or salutary.

The only place where there was ever any contest between gas and ether was in Hartford, by Dr. Wells and his friends.

The use of the nitrous oxide as an anæsthetic agent was never established even in the flourishing city of Hartford; and never, as far as we know, obtained any credit beyond it. In the month of December, 1844, it obtained currency in the city of Hartford for a day; but the disappointment of Dr. Wells on his exhibition in Boston, and his consequent abandonment of its use, put an end to its short-lived reputation, and on the attempt to revive it in 1846-'47 it had another short run and again sunk into disrepute.

Within the period of its short revival Dr. Beresford, of Hartford, used it once, removing a tumor from a lady under its influence:

"Question. Have you ever, in your practice, made use of nitrous oxide gas as an anæsthetic agent; if yea, when first, and who was the patient operated upon?"

"Answer. Yes. I operated in this city, January 4, 1848, on Mrs. Charles Abriel, removing, from the neighborhood of her shoulder, a tumor while under its influence.

"Question. Have you ever made use of nitrous oxide in any surgical operation since?"

"Answer. No, sir."

The following are extracts from his examination:

"Question. Was not the above operation as successful and satisfactory as any you have ever performed with any other anæsthetic agent?"

"Answer. It was quite as successful as any, so far as destroying sensibility was concerned.

"Question. You say the operation you have spoken of was quite as successful as any you ever performed, so far as destroying sensibility was concerned. In what was the operation not as successful?"

"Answer. The patient was very faint and depressed for about half an hour after recovering her perception.

"Question. Was not the administration of the gas in this case attended with asphyxia?"

"Answer. I think not.

"Question. What was the appearance of the face of the patient?"

"Answer. At this distance of time I cannot remember, to speak with precision.

"Question. Have you any idea that Dr. Wells ever perfected and brought to general use nitrous oxide gas as an anæsthetic agent in surgical operations?"

"Answer. No, sir; I do not think he did.

"Question. Is nitrous oxide, in your judgment, a valuable anæsthetic agent in dental and surgical operations?"

"Answer. I have never used it but in the case above alluded to, and give a decided preference to chloroform in surgical operations."

Dr. Crane, of Hartford, says:

"Answer. I once administered it to Dr. Warner. He brought a bag, which he said, and which I supposed, contained nitrous oxide, from Dr. Wells's office, and under its influence I extracted a number of his teeth. I think four.

"Question. When was this?"

"Answer. I think in March, 1845.

"Question. In your judgment is nitrous oxide gas a valuable and efficient anæsthetic agent in dental operations?"

"Answer. I should say no."

Dr. J. M. Greenleaf, of Hartford, says:

"Question. Have you ever made use of nitrous oxide gas in your dental business to prevent pain in extracting teeth?"

"Answer. No, sir."

"Question. Have you ever seen it administered; and if so, by whom and where?"

"Answer. I saw it administered once, by Dr. S. A. Cooley, which produced vomiting. This was at my office."

"Question. Was the experiment entirely unsuccessful?"

"Answer. Yes."

Dr. Cynel Bullock, surgeon dentist, of Hartford, says:

"Question. Have you ever, in your practice, made use of nitrous oxide gas as an anæsthetic agent; if yea, when first, and who was the patient operated upon?"

"Answer. Yes; I operated in this city, January 4, 1848, on Mrs. Charles Gabriel, removing, from the neighborhood of her shoulder, a tumor, which was under its influence."

"Question. Have you ever made use of nitrous oxide in any surgical operation since?"

"Answer. No, sir."

"Answer. I have, about the year 1846 or 1847, at the house of Mr. P. H. in this city, by S. A. Cooley. It was not successful. It was administered to me, I might extract some teeth, but it did not produce insensibility, and I did not extract the teeth."

"Question. What was the effect produced on the patient?"

"Answer. She appeared wild and restless."

It is the opinion of your committee, from all this evidence, that nitrous oxide was not used by the profession generally in the city of Hartford, or approved by them at any time as an anæsthetic agent.

J. Mason Warren, physician and surgeon, being sworn, said:

"I have never seen nitrous oxide used but once as an anæsthetic agent; was an experiment in 1848. My belief is that it is not to be compared in effects with sulphuric ether."

Geo. Hayward, physician and surgeon, being sworn, said:

"In my opinion, the use of nitrous oxide gas is not altogether safe, and is by no means efficient or convenient. I never saw it attempted to be used but once, and then with only partial success. The effects produced by inhalation are very uncertain, and very different in different subjects, and therefore it cannot be relied upon for the purposes of surgeons."

Henry J. Bigelow, physician and surgeon, being sworn, said:

"The nitrous oxide is usually administered from a bag, under the name of exhilarating gas. I should think it altogether inadequate to produce either certain insensibility, or one that was available for surgical purposes, except inducing asphyxia, which is dangerous, and which is no part of true anæsthesia. It is a gas, and must be inhaled by means of an orifice in the vessel which contains it. The difficulty in the way of success, when it is inhaled from a usual bag, is that the supply of oxygen which it contains is soon exhausted while the bag becomes filled with the noxious exhalations of the lungs."

breathing ether, a fresh supply of vapor, well mixed with atmospheric air, is taken into the lungs at every breath, while what is breathed out of the lungs escapes into the apartment as waste. Nitrous oxide is not of much value as an anæsthetic agent. An obvious and insuperable objection to it is its bulk and the difficulty of its transportation. Even if it were compact, I know of no evidence that it is an efficient agent. It is not anywhere used at the hospitals, or elsewhere, in surgical operations, nor in obstetric cases, to my knowledge."

Dr. Marcy, with whom Dr. Wells counselled much, and who operated in and reported the operation on the scirrous testicle above referred to, under the influence of the nitrous oxide, and certifies to the success of the operation, entertained the same opinion with Doctors Wells and Riggs. He did not believe that nitrous oxide was at the same time safe and efficacious as an anæsthetic agent. In an article published in the *Journal of Commerce*, December 30, 1846, when the medical world was active with Dr. Morton's discovery, he says:

"My own opinion in regard to the use of the nitrous oxide gas, the sulphuric ether, or any other stimulant which acts upon the system in such a manner as to render the body insensible to external impressions, is, that it is decidedly unsafe, and that in no given case can we be certain that it will not cause congestion of the brain or lungs. I have known the use of both the first named articles to give rise to temporary congestion of the brain and insanity."

From all this it is evident that nitrous oxide has never been, and is not now, approved by the profession generally. In the second short period of its existence Dr. Wells attempted to introduce nitrous oxide gas into the New York hospital, the failure of which is detailed in the following letter:

"NEW YORK, *October 1, 1853.*

"I recollect distinctly having been present in the operating theatre of the New York hospital, in 1847, to witness an operation by the late Dr. John Kearny Rogers. Dr. Horace Wells was present and administered nitrous oxide gas to the patient, with the object of producing insensibility to the pain of the operation, but the attempt was unsuccessful, as the patient seemed to suffer about as much pain as might have been anticipated under ordinary circumstances. A large number of surgeons and physicians were present, among whom was Dr. Valentine Mott, and other prominent members of the profession.

"As the supply of the supposed anæsthetic agent was apparently ample, judging from the large size of the bags containing it, and its administration conducted fairly and fully, the general impression upon the spectators seemed to me to be decidedly unfavorable as to its power of producing insensibility to pain
"WM. H. VAN BUREN, M. D."

Dr. James R. Chilton, an eminent chemist of New York city, who was present, and prepared the nitrous oxide for the experiment, says the application was not successful, "the patient screaming out under the operation." The French Academy of Science, on rejecting these claims, remarked that the nitrous oxide was dangerous and improper, and did not produce the effects alleged by Horace Wells.

Drs. Mott, Francis, and Parker, eminent surgeons of New York city, were led to believe, by ex parte statements, that Dr. Wells was the first discoverer of a safe and available anæsthetic agent, in the month of December, 1852, made affidavit to their belief, but on full information they changed their opinion, and gave the public to know the fact by the following card:

"The undersigned, fearing that the public may be misled by the republication at this time of certain affidavits made by them in the month of December, 1852, in which we severally asserted our belief that Horace Wells, of Hartford,

Connecticut, was the original discoverer of the anæsthetic principle as applied to the removal of pain in surgical operations; which affidavits were made by us at the solicitation, and in consequence of the representations of the Hon. Truman Smith, then United States senator from Connecticut, we feel it to be our duty to state that *a subsequent and careful examination of the facts in the history of the discovery of anæsthesia have led us to a different conclusion.*

"The undersigned coincide in the belief that the first great triumph of placing in the hands of the profession an agent capable of rendering the patient, safely and at will, utterly insensible to the stroke of the surgeon's knife, was in detecting and establishing by experiment the anæsthetic powers of sulphuric ether. For this discovery the world is indebted to Dr. Wm. T. G. Morton, of Boston. Whatever may have been the steps preliminary to this remarkable discovery, Dr. Morton's claim to it is established beyond all controversy, and his merit in this respect, with those who have taken the trouble to inform themselves on the subject, can be no longer a question of dispute. Holding this opinion, they have signed the 'appeal of members of the medical profession,' in this city and Boston, to establish a national testimonial, by voluntary subscription, for the benefit of Dr. Wm. T. G. Morton, and have united in recommending his claims for remuneration to the consideration of their fellow-citizens, and of soliciting their subscriptions in behalf of the fund.

"VALENTINE MOTT, M. D.

"WILLARD PARKER, M. D."

"NEW YORK, December 17, 1858.

"I hereby set forth that my concurrence in the recommendation of Dr. Morton's claims for public remuneration was grounded on the *conclusive* evidence that through his experiments, perseverance, and energy it was made manifest that sulphuric ether might be used as an effective anæsthetic agent in surgical operations. To Dr. Morton's early devotion I believe the world is indebted for the important knowledge we possess on this subject so interesting to humanity.

"JOHN W. FRANCIS, M. D."

It failed in the New York hospitals. It has never been adopted in any of our public institutions, nor in the army or the navy of the United States, and it is not at all known that it could or can be used with safety. Its strongest advocates would hardly now risk their reputation by using it in a capital case, if indeed it were possible to find a subject who would submit to an operation under its influence, or a surgeon who would be willing to administer it.

So desirous was Dr. Morton of showing this fact, that on one occasion, when the subject was before a congressional committee, and his claim was opposed, and the virtues of ether condemned, he submitted to that body the following fair and impartial proposition:

"NATIONAL HOTEL,

"Washington, January 18, 1853.

"DEAR SIR: The subject of the discovery of anæsthesia being now before a committee of which you are chairman, I beg leave to submit to you, and through you to a committee, a proposition.

"One of those who contest my right to the discovery does so on the ground that anæsthesia had been discovered by Dr. Wells prior to my alleged discovery and that the anæsthetic agent used in the discovery by Dr. Wells was nitrous oxide gas. Now, if anæsthesia, for surgical purposes, was ever discovered through nitrous oxide gas as the agent, that agent, for the same purposes, will still manifest its efficiency. I deny that such a discovery, by means of said agent, ever was made, or that said agent possesses available anæsthetic proper

ties alone for surgical operations. At the same time I assert and claim that anæsthesia was first discovered by me through the agency of sulphuric ether. Therefore, to prove that nitrous oxide never was discovered to be an available anæsthetic agent in surgical operations, and that it is not such now, and to prove also that sulphuric ether was discovered to be an available anæsthetic agent for such purposes, and is so now, I propose that an actual demonstration shall be made before the committee of the two agents, in such surgical operation or operations as are considered fair tests by scientific men, at such time as the committee may direct, and patients obtained.

"Yours, very truly,

"W. T. G. MORTON, M. D.

"Hon. J. P. WALKER, *Chairman, &c.*"

This offer was accepted by the committee, who selected a prominent surgeon to conduct the demonstration. Apprehensive that it might be said that the nitrous oxide gas could not be procured, Dr. Morton caused it to be manufactured by Dr. Kidwell, (a competent chemist recommended by a professor of Columbia College;) and further, to satisfy the surgeon of its purity, he administered it to several persons on the evening of January 27th, in his presence and that of several senators.

The demonstration came off on the 28th, at the Washington Infirmary, where Dr. Morton had a patient and the nitrous oxide gas in readiness. The surgeon was urged by the chairman of the committee to use the nitrous oxide. He refused peremptorily. He had also been requested to do so by Mr. Truman Smith, the member of Congress who supported the claim for the heirs of Dr. Wells, and had refused. Dr. Morton then proceeded, in presence of the committee, and of surgeons of the army and navy, and of the medical class, to administer ether. Complete etherization was produced, which continued through a dangerous and protracted surgical operation, lasting about three quarters of an hour.

And yet it has all the virtues now which it ever had, and the success which attended operations under its influence in Hartford, in 1844 and in 1847, if they were real, and not dependant on circumstances, would also attend them now in any of our public hospitals. The etheric vapors, administered by the hand of Dr. Morton at Fredericksburg to the wounded fresh from the battle field, proved successful in more than one hundred cases, and failed not in one. Your committee do not think that the attempt of Dr. Wells to find a useful and practicable anæsthetic agent in nitrous oxide gas, and his failure in that attempt, entitle him to public honor or reward, or that it detracts at all from the merits of the man who did, in fact, find and give to his country and the world a *safe, certain, and convenient* anæsthetic agent.

C.

CLAIMS OF CONTESTANTS.—A SUGGESTION.

Dr. Charles T. Jackson also claims the merit of the discovery. On the 23d day of February, 1849, Dr. W. T. G. Morton presented to Congress a memorial asking compensation for the discovery of anæsthetic or pain-subduing properties of etheric vapors, and on notice being given to Dr. Jackson by the chairman of the committee to which the memorial was referred:

To the Senate and House of Representatives of the United States in Congress assembled:

The undersigned begs leave to represent that, whereas a memorial has been presented to the Congress of the United States by William Thomas Green

Morton, of the city of Boston, in the State of Massachusetts, representing that in the year of our Lord one thousand eight hundred and forty-six, he, the said Morton, made, in the city of Boston aforesaid, a discovery by which the human body is rendered insensible to pain during surgical operations, and during other serious and violent affections, by means of the vapor of sulphuric ether inhaled into the lungs—praying, also, for a national renumeration or reward for making the said discovery, and for its practical application; and whereas the said discovery was made by the undersigned, without the knowledge of the said Morton, and without the co-operation or assistance of any person whomsoever, and was communicated by the undersigned to various persons, from the spring and autumn of eighteen hundred and forty-two to the thirtieth day of September eighteen hundred and forty-six inclusive, and on the said thirtieth day of September was also communicated by the undersigned to the said Morton, he, the said Morton, being, previous to the said communication of the discovery to him wholly ignorant of the anæsthetic properties and effects of sulphuric ether aforesaid; and whereas the undersigned did, also, on the thirtieth day of September eighteen hundred and forty six, devise and commit to the said Morton the performance of an experiment for the verification of the said discovery, so far as the extracting of teeth is concerned; and whereas the said Morton, acting in strict conformity with the instructions, and upon the exclusive and expressly assumed responsibility of the undersigned, did, to the extent of a painless extraction of a tooth, successfully verify the said discovery; and whereas the undersigned did, shortly afterwards, cause the discovery to be further verified by the surgeons of the Massachusetts General Hospital, in the first painless capital operation ever performed under the influence of the ether vapor; and whereas the signature of the undersigned to certain letters patent, taken out in the joint names of the undersigned and of the said Morton, declaring the discovery to be their joint invention, was obtained through the representation of Robert F. Eddy, esq., of said Boston, the solicitor by whom the said letters patent were procured, and copartner with the said Morton in the profits thereof, that the undersigned “might lose all his credit as a discoverer,” if he did not consent to become a party to the said letters patent; and whereas the undersigned, after being instructed by eminent legal counsel that the said Morton had not rendered himself in any sense a joint discoverer, by reason of the painless extraction of a tooth as aforesaid, and that he had not thereby acquired any right either to an exclusive patent or to a participation with the undersigned in any patent upon the said discovery, did publicly repudiate all connexion with the said letters patent, and did refuse any part of the proceeds arising from the sale of licenses under the same, and did, as he originally intended, give the discovery freely to the world to the full extent of his interest, evidence of all which is herewith submitted. The undersigned does, therefore, earnestly remonstrate against the memorial of the said Morton, and prays that his petition may not be granted and that there may not be, on the part of the Congress of the United States, any recognition whatever of his claims to the said discovery.

CHARLES T. JACKSON.

WASHINGTON, D. C., *January 29, 1849.*

This claim has been three times examined and as often rejected by the several committees of Congress. Your committee will, however, proceed to re-examination, availing themselves of the evidence as collated and the arguments as presented by the several committees indiscriminately, as they may find them most just and most cogent. The application of the evidence already considered to this particular controversy necessarily involves some repetition, but in this your committee will be as brief as is possible to be, at the same time intelligible. Dr. Jackson asserts, and it is essential to the support of his claim, that down to the 30th of September, 1846, Dr. Morton knew nothing of sulphuric ether,

appearance, its qualities, its effects, and that he had never seen it until on that day, when he showed it to him and directed him how and for what purposes to use it. Indeed, that he lacked the knowledge common to his profession, and in administering the ether he could only have acted in obedience to others.

This allegation your committee will now consider. Prior to the date of this discovery, Dr. Morton attended the lectures of the Massachusetts Medical College and the clinical instructions of the general hospital, and subsequently obtained his medical degree at the Washington University, Maryland. On the 20th of March, 1844, Dr. Morton, then a practicing dentist, entered his name with Dr. Jackson as a student in medicine, who gives him a certificate sufficiently commendatory. It is as follows:

To the secretary of the executive committee of the American Society of Dental Surgeons:

Mr. W. T. G. Morton, dentist, entered his name with me as a student of medicine March 20, 1844, and attended to practical anatomy in the Massachusetts Medical College during the winter of that year, where he dissected with diligence and zeal, and paid special attention to the anatomy of the head and throat—parts of human anatomy particularly important to the surgeon dentist. He also studied Bell's and other standard works on anatomy, and attended the lectures of Drs. Warren, Hayward, and other professors. I would recommend him as a suitable person for admission as a dental surgeon. He is a skilful operator in dentistry, both in surgical and mechanical departments, and has studied the chemical properties of the ingredients required for the manufacture of artificial teeth.

CHARLES T. JACKSON, M. D.

Prior to this time, Dr. Jackson had, as he states, recommended chloric ether as an external application to allay pain in the teeth and gums, and had furnished several dentists in Boston, his friends, with the article in its purity; he does not name Dr. Morton among the number, but from the relations which subsisted between them, from the fact that Dr. Morton was at that time the family dentist of Dr. Jackson, as well as his student in medicine, your committee think the statement of Dr. Morton, in this particular, supported by that of Dr. Jackson. Add to this the fact, well known at the time to college students, and especially to students of chemistry and medicine, that the vapor of sulphuric ether, inhaled for a short time, allayed pain, and we have the circumstances which would naturally direct the mind of the inquirer to that substance as one whose inhalation would be probably safe, and which would render the patient insensible during a short but painful operation. As additional proof of the direction of Dr. Morton's studies, and that he had the means in his power of knowing all that was known of this agent, then familiarly used as a nepenthe, your committee are referred to a bill of books purchased by Dr. Morton of B. B. Mussey, of Boston, on the 3d of May, 1845. Among them is Perier's *Materia Medica*, which contains the following sentence: "The vapor of ether is inhaled in spasmodic asthma, chronic catarrh, dyspepsia, and whooping cough, and to relieve the effects caused by the accidental inhalation of chloric gas." Its intoxicating or stupifying effects were, as we have already said, well known to students and scientific men.

This, taken in connexion with the conversation with Theodore Metcalf, a celebrated chemist of Boston, as early as May, 1846, just before he sailed for Europe, in which he gave Dr. Morton all the then current knowledge on the subject of the inhalation of the vapor of ether, and, among things, gave him an account of administering it to a student, who hurt himself while under its influence, and knew nothing of the injury until it was pointed out to him

afterwards, (see page 13;) and the testimony of Granville G. Hayden and Francis Whitman, (pp. 15, 16,) places the fact of his previous knowledge beyond doubt.

Your committee are satisfied from the statement of Dr. Morton, and from the evidence by which it is thus far fully corroborated, that prior to and on the 30th of September, 1846, he was occupied with the conviction that an anæsthetic agent might be discovered which would remove all insensibility to pain in patients submitted to the operations of the dentist; that sulphuric ether was the agent; and that perfect success required only full assurance of its safety, ether of a good quality, and the proper mode of administering it; that he sought assurance of these by consulting books to which he had access, and learned men from whom he could obtain the current knowledge and experience of the day.

On the 30th of September, 1846, as he declares, he called on Dr. Jackson with a view of obtaining such information as would, if possible, remove the difficulties which he had encountered, and, at the same time, with a determination to conceal from him the object of his long and earnest pursuit, lest his hint should be taken and he be anticipated in his discovery. There were four persons present at this interview, and each gives an account different from the rest as to what occurred at it. All, however, agree in one particular, namely, that Dr. Morton assumed total ignorance of sulphuric ether, its nature and qualities, and left the impression on the minds of those present that he knew nothing of it. That he did at that time, in fact, know much of sulphuric ether; that it had for many months preceding been the subject of his earnest thought and sedulous inquiry; that his mind was so much possessed with it that he feared, in every one with whom he conversed, a rival who might anticipate him in his discovery and developments of its quality, is proved to the entire satisfaction of your committee. A former committee of this House, to whose able report we shall often have occasion to refer, speaking of the disguise thus practiced by Dr. Morton, says:

"This does not militate against the general effect of the statement of Dr. Morton. He went, as he says, to Dr. Jackson to obtain certain information; but at the same time anxious to conceal from him the object of his pursuit, being fearful lest Dr. Jackson might anticipate him in bringing the discovery to perfection. We deal with this matter as a question of fact, not of morals, and do not decide whether Dr. Morton might consistently, with the obligation which truth imposes, use artificial means to conceal a mental conception which he did not wish to divulge.

"We believe, however, where a person has a right to his secret, and is under no obligations to disclose it, a direct denial of that which was the fact, for the purpose of such concealment, has not been visited with strong moral censure. We would instance the case of Walter Scott at the table of George IV, who, when toasted by his Majesty as the author of *Waverley*, declared he was not the author."

Your committee concur in the opinion that, if any moral censure is to be visited upon Dr. Morton for a studied concealment of his possession of what he deemed to be a treasure above all price, and for the safety of which he so much feared, that censure must be slight indeed. His account of the interview will be found in his memoir to the Academy of Arts and Sciences at Paris, set out in the report of 1852.

Dr. Jackson, who first publicly made claim to the discovery after its immense importance was established by several safe and painless operations under its influence in the medical hospital, avers that he first disclosed to Dr. Morton the use of the vapor of pure sulphuric ether on the 30th of September; that he then communicated to him his prior discovery of its anæsthetic qualities, and assured him that it would prevent all pain in a surgical operation, and that it could be used with perfect safety; in short, that he, Dr. Jackson, then employed Dr.

Morton as his agent, operator, or "*nurse*," to administer this pain-destroying vapor; and that then, in the presence of two witnesses, he distinctly took upon himself all the responsibility of its administration.

One of the witnesses present, George O. Barnes, sustains Dr. Jackson's statement in two material points, namely, that when he advised the administration of sulphuric ether, he averred that it would render the operation painless, and that it was safe, and he would be responsible for its consequences.

The other witness, James McIntire, though evidently testifying with a strong opinion against Dr. Morton, does not support Dr. Jackson on either of these important points. He says, Dr. Jackson advised the use of sulphuric ether; said it was safe, and that it "would make the patients insensible, and" the operator "could do what he had a mind to with them." But he states no assumption of responsibility, and no opinion or assurance of Dr. Jackson, that the vapor of sulphuric ether would render the patient so insensible as not to perceive pain. The evidence of these witnesses will be more particularly considered in another connexion. Suffice it for the present to say that your committee are satisfied that Dr. Jackson did not, on that day, "*expressly*" assume any such responsibility. They cannot credit it, for it is proved by evidence, and was admitted in the argument by Dr. Jackson's counsel before the committee of 1849, that the morning after the successful operation of September 30, when the same was reported to him, he refused to certify *in writing* for Dr. Morton that the vapor might be inhaled with safety. Dr. Jackson could not, as an honorable man, have taken the responsibility *orally* of the exhibition of a medical prescription, claimed as his own, and exhibited by an agent or operator under his instruction; and forthwith, thereafter, have refused to assume the same responsibility *in writing*. And, indeed, it is usual for physicians to give their prescriptions in writing, not orally. Nor do your committee believe that Dr. Jackson on that occasion declared that the inhalation of the vapor of sulphuric ether, within safe and proper limits, would render the operation painless. If he had advanced such an opinion, it could not have failed to be noticed and remembered by his student, Mr. McIntire, for it would have been the first notice to him of a miracle in surgery. But Dr. Jackson's conversation with Mr. Caleb Eddy, on the 23d of October, 1846, and with the Hon. Edward Warren, is, in the opinion of your committee, conclusive upon this subject. On the evening of that day Dr. Jackson visited Mr. Eddy, and gave an account of the conversation between him and Dr. Morton, of September 30, which the witness having detailed, says: "After Dr. Jackson had related the above, I said to him, 'Dr. Jackson, did you know at such time, that after a person had inhaled ether, and was asleep, his flesh could be cut with a knife without experiencing any pain?' He replied, 'No, nor Morton either; he is a reckless man for using it as he has; the chance is, he will kill somebody yet.'" And the Hon. E. Warren, in his letter, says: "Dr. Jackson told me, in substance, that the so-called discovery was not his, but that Dr. Morton was responsible for it; that the new use of ether was dangerous, and would, he feared, be attended with fatal consequences; that he (Dr. Jackson) was not answerable for the results, and that, therefore, he would refer me to Dr. Morton for further information."

We cannot better express our views as to the interview of 30th September, and the exact value of the evidence which relates to it, than by quoting from the report of the former committee of this House, to which we have already referred. After a close and careful examination of the statements, and evidence in reference to this interview, they say:

"The evidence, then, amounts to this: Dr. Morton came into Dr. Jackson's office, having in his hand a gas bag, with which he proposed to operate on the imagination of a refractory patient by administering to her atmospheric air. Dr. Jackson ridiculed the idea. Nitrous oxide was spoken of; Dr. Jackson objected to that, saying to Dr. Morton that if he attempted to make it, it would

become nitric oxide. He then suggested sulphuric ether, and said it would make the patient insensible, and Morton could do what he pleased with her. This conversation, it will be noted, all took place about a refractory patient; the object considered was the mode of bringing a nervous patient to a condition in which she could be operated upon, not in which she would feel no pain from the operation. Mr. McIntire says not one word about pain or its absence in the operation, but that the operator could do what he pleased with the patient under the influence of sulphuric ether. If this conclusion be correct, the information given by Dr. Jackson to Dr. Morton was no more than the current knowledge of the age—no more than he would have been told by any scientific man, or than he would have read in books which treat of chemistry and medicine; and if it differed in anything from the general opinion of scientific men, it was in a stronger than ordinary assurance that the vapor was not injurious to health."

The first public appearance of Dr. Jackson at the hospital during the performance of an operation under the influence of the newly-discovered anæsthetic agent is shown in the following extract from a letter of Dr. S. D. Townsend, one of the surgeons of the hospital, dated January 29, 1852:

"Dr. Jackson presented himself for the first time on the 2d of January, 1847, and brought with him a bag of oxygen gas as an antidote to asphyxia. I have had this date always fixed in my mind by the fact that I performed an amputation on that day under the influence of ether, and this is also confirmed by the records of the hospital" *

Dr. Jackson, in a letter addressed by him to Baron Von Humboldt, dated November 22, 1851, a copy of which he filed with this committee (1852) in support of his claim to the discovery, after giving an account of the habitual use of the vapor of sulphuric ether for the purposes and in the manner which we have shown to have been familiar with the medical faculty since about the year 1795, states the facts, and details the circumstances which he alleges to have attended its inhalation by himself in the winter of 1841-'42, and gives at length what he says were his deductions from the phenomena consequent on that inhalation. He says:

"The circumstances were as follows: In the winter of 1841-'42 I was employed to give a few lectures before the Mechanics' Charitable Association in Boston, and in my last lecture, which I think was in the month of February, I had occasion to show a number of experiments in illustration of the theory of volcanic eruptions, and for my experiments I prepared a large quantity of chlorine gas, collecting it in gallon glass jars over boiling water. Just as one of these large jars was filled with pure chlorine it overturned and broke, and in my en-

* This was after the ether was shown by a number of experiments to be entirely safe, and that no antidote other than atmospheric air was necessary. Dr. Townsend, testifying in 1853, says:

"The first time I ever saw Dr. Jackson at the hospital at an operation, after the introduction of the use of ether there, was the second of January, 1847. On that day I amputated the leg of a female. Dr. Jackson then appeared in the operating room with a bag containing oxygen gas under his arm. He stated to me there that we should always have oxygen gas prepared and ready in case of accident in the employment of ether, and he feared that some accident would take place in the use of it. I am positive as to this day and this occurrence from examining the records of the hospital, and from my own private record of operations.

"17th. Was or not this interview of January 2, 1847, the first time you had seen him in connexion with the use of ether?

"Answer. Yes, it was; and I had been present at all the operations from the commencement to that time.

"18th. What was done with the oxygen? Of what use was it?

"Answer. No use was made of it. I never knew it to be used. It would supply that portion of the atmospheric air which is wanting in cases of asphyxia, still I never knew it to be used."

avors to save the vessel I accidentally got my lungs full of chlorine gas, which early suffocated me, so that my life was in imminent danger. I immediately had ether and ammonia brought to me, and alternately inhaled them with great relief. The next morning my throat was severely inflamed and very painful, and I perceived a distinct flavor of chlorine in my breath and my lungs were still much oppressed. I determined, therefore, to make a thorough trial of the ether vapor, and for that purpose went into my laboratory, which adjoins my use in Somerset street, and made the experiment from which the discovery of æsthesia was induced. I had a large supply of perfectly pure washed suluric ether, which was prepared in the laboratory of my friend Mr. John H. Lake, of Boston. I took a bottle of that ether and a folded towel, and seating myself in a rocking chair, and placing my feet in another chair, so as to secure a fixed position, I reclined backward in the one in which I was seated. Taking the towel in the ether, I placed it over my nose and mouth, so as to inhale the ether mixed with the air, and began to inhale the vapor deeply to my lungs. At first the ether made me cough, but soon that irritability ceased, and I noticed a sense of coolness, followed by warmth, fullness of the head and chest, with giddiness and exhilaration; numbness of the feet and legs followed, a swimming or floating sensation, as if afloat in the air. This was accompanied with entire loss of feeling, even of contact with my feet in the air in which I was seated. I noticed that all pain had ceased in my throat, and the sensations which I had were of the most agreeable kind. Much pleased and excited, I continued the inhalation of the ether vapor and soon fell into a comatose state, and then became unconscious of all surrounding things. I know not how long I remained in that state, but suppose that it could not be less than a quarter of an hour, judging from the degree of dryness of the cloth which, during the state of unconsciousness, had fallen from my mouth and nose and lay on my breast. As I became conscious I observed still there was no feeling of pain in my throat, and my limbs were still deeply benumbed, as if the nerves of sensation were paralyzed. A strange thrilling now began to be felt along the spine, but it was not in any way disagreeable. Little by little sensation began to manifest itself, first in the throat and body, and gradually extended to the extremities, but it was some time before full sensation returned, and my throat came really painful.

"Reflecting upon these phenomena, the idea flashed into my mind that I had made the discovery I had for so long a time been in quest of—a means of rendering the nerves of sensation temporarily insensible to pain, so as to admit of the performance of a surgical operation on an individual without his suffering therefrom. That I did draw this inference, and did fully declare my unqualified belief in both the safety and efficiency of the method of destroying all sensation of pain in the human body during the most severe surgical operations, none doubts, and it is fully proved by abundant legal evidence which has never been impeached or doubted in any quarter.

"I beg leave to refer you again to the evidence of Dr. William F. Channing, a man of science, fellow of the American Academy of Arts and Sciences, son of the late Dr. William E. Channing, our most eminent divine; to the testimony of Dr. S. A. Bumie, one of the most eminent dentists; to the letter of John H. Lake, a distinguished chemist; and to the testimony of Mr. Henry D. Fowle, one of the best and most faithful apothecaries of Boston, (and to the letters of Dr. George T. Dexter, of New York, and of Dr. Jay Browne, of New York, obtained since this paper was written.) Their evidence, with that of my worthy friend and former pupil, Mr. Joseph Peabody, *élève ingénieur à l'école des mines de Paris*, prove that I had made this discovery, and long before any other person had even tried a single experiment of the kind.—(See, also, the new and very important evidence of Dr. George T. Dexter, of New York, and that of Mr. D. Browne.)

"In the rapid inductions of the mind it is not always easy to trace the exact method of thought by which we suddenly arrive at great truths. But, so far as I can trace the reasoning that rapidly flowed through my mind, it was based upon principles well understood by all educated physicians and physiologists. I knew that the nerves of sensation were distinct from that of motion and of organic life, and that one system might be paralyzed without necessarily or immediately affecting the others. I had seen often in my medical practice the nerves of sensation paralyzed without those of motion being affected, and those of motion paralyzed without those of sensation being influenced; and both the nerves of motion and sensation paralyzed without the ganglionic nerves or those of organic life being affected. I knew, also, that the nerves of sensation are stationed as sentinels near the exterior of our bodies, to warn us of dangers from external causes of injury, and that there is no feeling in the internal portions of our bodies. I knew, also, that when the knife is applied in surgical operations that there is little sense of pain in any parts beneath the skin. This my own surgical experience, as well as that of others, had long ago demonstrated, and the philosophy of these physiological facts was made known to the medical world, in England and in this country, by the researches of Sir Charles Bell of England and was fully proved by all the eminent anatomists and physiologists of Europe. Now, I had observed, 1st, that the nerves of sensation in my own body were rendered insensible to pain for some time before unconsciousness took place.

"2d. That all pain had ceased in a suffering part of my body during the stages of etherization preceding and following the unconscious state.

"3d. That this state of insensibility of the nerves of sensation continued for a sufficient length of time to admit of most surgical operations, and I had reason to believe that during the unconscious period the degree of insensibility was still greater, so that it would be impossible that any pain could be felt in a surgical operation.

"4. That the nerves of motion and of the involuntary functions of respiration and circulation were in nowise affected, the functions of life going on as usual while the nerves of sensation were rendered devoid of feeling, and the body could suffer no pain. By long experience in the trial of ether vapor in spasmodic asthma, and from numerous carefully-conducted physiological experiments, I had learned that the vapor of ether could be safely inhaled into the lungs to an extent before believed to be highly dangerous.—(Wood and Bache's Dispensatory; Beck's Medical Jurisprudence.) That I did first discover that the nerves of sensation could be and were paralyzed to all sensation temporarily and safely by the inhalation of ether vapor is admitted by all scientific men who have examined the evidence. That I did first prescribe its administration for the purpose of preventing all sensation of pain in surgical operations, with the guarantee, on my medical and scientific responsibility, of its entire safety, if my directions were strictly obeyed, and did thus introduce the use of pure sulphuric ether, mixed with air, into surgical practice is fully proved by abundant testimony; and this is admitted by all persons who have examined the evidence that I have caused to be printed.

"The only point contested by my opponents is that, in their opinion, I have not sufficient reason for drawing the inference that I did, as they admit, draw from my data, and that I could not have 'known' the full extent of the insensibility to pain of a surgical operation, and that this remained to be verified by actual trial. Now, it appears to me clear enough that when I had discovered that the nerves of sensation were paralyzed, that I did know that the body could feel no pain, and that my induction was the most natural thing in the process of reasoning from my well ascertained data. To the ignorant it is easy to appeal my allegations, like those of my very unscientific opponents, that 'Dr. Jackson could not have known,' anterior to the verification experiments performed

the hospital, that the patient was wholly insensible to pain when under the influence of ether; but no scientific physiologist or physician can possibly entertain a doubt of the sufficiency of my evidence that the body could feel no pain when the nerves of sensation were rendered insensible. Again, it is claimed by my opponents, that inducing an ignorant dentist, a man of no medical knowledge, to perform the mere mechanical operations, under my advice and upon my medical responsibility, expressly assumed before witnesses, that I made him a partner or joint discoverer, and that he made the first application of my discovery. Now, I respectfully dissent from this opinion, and, in my dissent, I am sustained by the highest scientific, medical and legal authorities of this country, and by the most eminent men of science of Europe, who have considered this question. I claim that I not only discovered the principle, but also by my advice and prescription, as above stated, made the application in the highest sense of the term."

Your committee will attempt to determine the weight which ought to be given to this statement; first, by collating it with other facts in the case, of which you can have no doubt; second, by comparing it with other written statements of the same incident, made by Dr. Jackson himself, of an earlier date; third, considering its inherent probability when viewed in connexion with Dr. Jackson's own well-established acts and omissions; and lastly, the extent to which it is supported or assailed by extrinsic evidence.

A portion of this statement of Dr. Jackson struck your committee with some surprise; that, namely, in which he says: "*That I did first prescribe its administration for the purpose of preventing all sensation of pain in surgical operations, with the guarantee, on my medical and scientific responsibility, of its entire safety, if my instructions were strictly obeyed, and did then introduce the use of pure sulphuric ether vapor, mixed with air, into surgical practice, is fully sustained by abundant testimony; and this is admitted by all persons who have examined the evidence that I have caused to be printed.*" The only point contested by my opponents is that, in their opinion, I had not sufficient reason for making the inference that I did, as they admit, draw from my data, and that could not have been 'known' the full extent of the insensibility to pain of a surgical operation, and that this remained to be verified by actual trial."

This is, within the knowledge of your committee, a wide departure from the actual state of fact touching the controversy. It is known to us by numerous statements, printed and written, that the positions which Dr. Jackson thus avers have been universally conceded to him, are the very positions which have been most constantly and strongly contested since he first claimed for himself the merits of the discovery. It appears, too, that neither of these points was conceded to him, but both adjudged against him by the Massachusetts general hospital in their report of January, 1848, and most distinctly and emphatically by the report of the committee of this house of February 24, 1849.

The hospital report notices this subject as follows:

"Down to September 30, 1846, Dr. Jackson had discovered nothing that had not been known and in print in London for some years. It was known that ether would produce insensibility; that such insensibility, though sometimes fatal, was sometimes safe; and that one of the properties of ether was its power to obviate the ill effects of an inhalation of chlorine gas. The discovery of the safety and efficacy of the inhalation of ether in surgical operations had not yet been made; the only experiments which Dr. Jackson had tried, or intended to be tried, being those already prescribed by the text-books. Dr. Jackson had for some time entertained a strong impression that it could be done with safety and effect during the operation of the dentist—a conjecture which a hundred other persons may have made without discovering the fact; and incidentally on more than one occasion he had advised its use for that class of operations, but had been unable to persuade any one to use it, not even

persons of science and intelligence, who were most familiar with all that Dr. Jackson knew or thought upon this subject.

"Dr. Morton had for some time been engaged in searching for a safe agent for promoting insensibility during dental operations. He knew of and had upon one occasion, taken part in the nitrous oxide experiments of Dr. Wells.

"As early as July, 1846, he purchased sulphuric ether, and proceeded to experiment upon it. On September 30, 1846, he has an interview with Dr. Jackson, and receives his decided advice to use pure, rectified sulphuric ether during a dental operation, accompanied with the strongest assurance of its safety, and with the information where it could be obtained. Dr. Morton unlike others who had received this advice, and notwithstanding he knew the prevailing belief of the dangerous and sometimes fatal character of this agent forthwith acted upon it. That he proceeded to inhale it himself rests, indeed on his own assertion. The committee have no doubt of its truth. He certainly administered it to a patient. *By so doing he made this discovery.* On learning this result Dr. Jackson very naturally suggested to Dr. Morton that he had better get the ether tried by the surgeons of the hospital, which a witness of Dr. Morton's, however, alleges that he had previously determined to do. But all the subsequent steps were taken by Dr. Morton himself, without the slightest sympathy or co-operation on the part of Dr. Jackson, who, from alleged fear of his recklessness, withheld from him all countenance and encouragement. In view of these facts the committee are of opinion that the *exclusive* claims advanced by Dr. Jackson, though now very extensively recognized in foreign countries, are unfounded, being unwarranted alike by his acts and by his omissions, and that they involve great injustice towards Dr. Morton; that their names will be forever jointly, though not equally, associated in this discovery—Dr. Jackson being entitled to the credit of having rendered available the existing knowledge upon the subject of ether, which Dr. Morton was really though not avowedly, seeking to obtain, and Dr. Morton having first demonstrated its safety and efficacy in the prevention of pain during surgical operations; and that Dr. Morton, by consenting to permit Dr. Jackson's name to be united with his in the patent, with the right to receive *one-tenth* part of its profits, has shown himself disposed, fairly and honorably, to recognize the amount of his indebtedness to Dr. Jackson's advice."

In the report of the committee of the House, in February, 1849, where these questions are carefully examined, the conclusion is against the claim of Doctor Jackson on both these points; they say:

"It is, however, contended by Doctor Jackson, that in the administration of ether to his patient on the 30th September, and in the subsequent exhibition of it in the hospital, Doctor Morton acted as his agent, merely; that he was, in fact, the experimenter as well as the discoverer, and the merit of success or the responsibility of failure rested on him. This position your committee will now proceed to examine.

"This claim is not supported by the evidence which has been thus far considered; indeed, it bears strongly against it, and your committee can find no contemporary matter touching this point, except a statement of George O. Barnes not yet commented upon. The witness, after stating Doctor Jackson's efforts to overcome the scruples of Morton, says: 'Indeed, Doctor Jackson urged the matter very earnestly and with perfect confidence, taking on himself the whole responsibility.' Now, if this be a deduction, an inference from the conversation stated, it is of no value whatever, except to show a certain earnestness in the witness. If it be but a further declaration, it is unsupported by the testimony of McIntire; and, in a third important particular, differs from and goes beyond him. But the well attested conduct of the parties themselves, at the time of the transaction in which this agency is claimed to have been conferred and accepted what is termed by lawyers the *res gesta*, shows more clearly than everything

else the true relation which they then bore to each other, and each of them to the subject matter in controversy.

"Doctor Jackson claims that he had long had in his mind a conviction that the vapor of sulphuric ether could be inhaled without danger or injury to the patient, and that under its influence surgical operations could be performed without pain. All admit him to be a man of science, fully aware of the mighty value of such a discovery, and not at all indifferent to his own reputation in the scientific world. In this state of things we cannot conceive it possible that he could have remained inactive for years, waiting till chance should send him some one to bring out his great discovery, instead of proceeding himself by direct experiment. It is not at all disputed that Doctor Morton went to Doctor Jackson's shop that day uninvited; that *his own wants* and not Doctor Jackson's *wishes and purposes* led to the conversation; that there was nothing of an especially confidential nature between them; that what Doctor Jackson said to him he said in his usual manner of public conversation, and not like a man who was engaging another to bring out a most important discovery to the world.

"But take Doctor Morton to be just what Doctor Jackson and his two witnesses represent him to have been at the time of that conversation, was he the man whom Doctor Jackson would have trusted to represent him in a matter so deeply involving his character and his fame? Say it is Jackson's discovery, the experiment is his, *he* is responsible for the consequences. If it succeed, he has made the noblest contribution to surgical science which the century has witnessed; if it fail, the consequences might be most disastrous. Whom does he select to carry out this, the most important conception of his life or of the age? Let his two witnesses answer.

"According to them, a man profoundly ignorant of the powerful medicinal agent which he was directed to employ—one who did not know what kind of 'stuff' sulphuric ether was, and who wished to see it in order thus to test its qualities, is selected by one of the first scientific men of the age to conduct a delicate and dangerous experiment with this same sulphuric ether, on the success of which even more than reputation depended. If Doctor Jackson had dwelt upon the subject, conceived the discovery in his own mind, considered it with a view of making it known to the world and useful to mankind, he knew that much depended on the first public exhibition; and he also knew that it required science, prudence, and skill, to render the experiment successful, and prevent its becoming disastrous. Sulphuric ether would produce insensibility to pain; *too little* of it would make the experiment ineffectual, and bring the operator and his nostrum into ridicule; *too much*, or the proper quantity *unskillfully administered*, would produce asphyxia, probably death. Under these circumstances, how can your committee believe that Doctor Jackson would have trusted such a man as his witnesses represents Doctor Morton to be with his first experiment upon his great discovery? Would it not have been inexcusable in him to have done so? Would it not have shown a recklessness of his own fame and the lives of his fellow-men?

"Such a conclusion, your committee are satisfied, cannot be imputed to him with justice. Had Doctor Jackson made the discovery and felt that it was his, he could not have failed to be at once aware of its vast importance, and the world-wide reputation it would give him, and he would not have trusted it for a moment in the hands of a man less skillful and scientific than himself? Indeed, would he have intrusted it with any one? but would he not have himself seen that it was administered in a proper manner, and under proper conditions to make it safe and effectual? Would he not have stood by and watched the sinking pulse of his first subject, until insensibility was complete, and have been careful to withdraw it when he saw it was likely to endanger life, and have done all that science and skill could do to avoid a failure or a catastrophe? But there was nothing of this. Having given the information which he did give in

the conversation with Doctor Morton, he turned neither to the right nor left, no troubled himself further on the subject, until he was advised by Doctor Morton that the experiment had been successful. He expresses no surprise, no emotion it is an incident of the day—an occurrence. According to the testimony of Barnes, he advises Doctor Morton to try it in some capital operation in the hospital; does not say he will try it himself, which he might or ought to have done if Doctor Morton had been his agent. He does not propose to get permission for Doctor Morton so to try it, though he well knew the application by himself or in his name, would insure the permission. He advises Doctor Morton to get permission to try it in the hospital, and does not propose to be present, and in fact is not present when the trial is made, though the hospital was but five minutes' walk from his door. That operation was successfully performed, and another was noticed to take place the next day, about which Doctor Jackson gave himself no concern, and at which he was not present. The committee feel that his conduct during this time was wholly inconsistent with the fact that he recognized the discovery as his own and that these were his experiments.

"It is urged as a reason for his absence at the first operation in the hospital that Dr. Morton did not inform him at what time it was to take place. As to this, there is no proof that he did or did not inform him; but surely, had Dr. Jackson felt the solicitude which the discoverer would naturally feel, he would have informed himself, and his daily associations naturally led him to the knowledge. On the other hand, after the successful operation of the 30th of September, and after Dr. Morton had seen his patient, and ascertained that he had suffered no injury from the ether, elated with his success, he consulted Dr. Hayden as to the mode of bringing out the discovery, and suggested at once that he would introduce it into the hospital. A few days afterwards he told Dr. Hayden that Dr. Jackson would not countenance the discovery, and again said he would go to Dr. Warren and endeavor to have it introduced into the hospital. The fact that Dr. Jackson refused to give Dr. Morton a certificate that ether was harmless in its effects, or might be used with safety, is admitted by Dr. Jackson in his defence by the Messrs. Lord; but they say it proves nothing but Dr. Jackson's 'unwillingness to figure in Dr. Morton's advertisements, and his prudence in refusing to make himself responsible for anything and everything Morton, in his ignorance, might do with an agent liable to the most dangerous abuse.'*

"This witness, Barnes, says that on the 30th of September, Dr. Jackson em-

* If Dr. Morton was all this time proceeding at his own suggestion, and on his own responsibility merely, Dr. Jackson had a right to give or refuse his certificate of the safety of the ether, according to his opinion of its merits; but if he prescribed it and employed Dr. Morton to administer his prescription, and if under his direction Dr. Morton did administer it in a case of dentistry; if on this being reported to Dr. Jackson, he directed Dr. Morton to have it tested in a case in the medical hospital, and when asked for a *written certificate* he refused it, he cannot be visited with too harsh a censure. According to this assumption, he sent an ignorant and rash operator to the hospital to impose upon the faculty. He sent him armed with a nostrum which he would not say *in writing* was not dangerous to life, leaving the *professional* responsibility of the event to rest on the faculty. He sent "his nurse" without *written authority or directions* to administer what the medical faculty of the age pronounced to be a poison, and what was a poison in unskilful hands, thus leaving him subject to all the legal liabilities which a fatal result would involve, and remaining himself free from liability or reproach. His conduct, as he now represents it, involves—1st. Dishonorable imposition on his brother surgeons of the hospital. 2d. Exposing to unaccountable jeopardy human life. 3d. Falsehood and treachery to the man, *the hand*, used in the administration of his prescription. Such is the judgment which Dr. Jackson would bring upon himself by his statement, and that of his witness, Barnes, in support of his, if it be believed. But your committee do not believe it. Even on his own assertion they do not believe Dr. Jackson guilty of conduct so atrocious. They, therefore, cannot, and do not, believe that branch of the statement in the letter to Baron Humboldt true.

oyed Dr. Morton to use this new agent. He assured him it would '*not do the least injury.*' He '*urged the matter very earnestly, expressly taking on himself the responsibility;*' and it was on the first of October, the morning after the successful experiment, that Dr. Jackson refused to give a certificate '*that ether was harmless in its effects,*' and yet, on the same day, the witness, Barnes, says, '*being advised by Dr. Morton of the success of the operation,*' Dr. Jackson said to him: '*You must go to Dr. Warren and get his permission to administer in the Massachusetts general hospital, and, if possible, it should be on a capital operation.*' And he goes on to say that Morton strongly objected at first going to the hospital; that everybody would smell the ether, and it would not be kept secret; but that after learning something to disguise the odor he agreed to apply to the hospital.

"We have already adverted to the fact that Dr. Morton, the very evening after the successful operation, suggested to Dr. Hayden that he would go to the hospital and get permission to try the ether there; that he went the next morning to Dr. Jackson, and returned, saying Dr. Jackson would not give his countenance to the discovery; and it is admitted that Dr. Jackson refused him the certificate he wished for, and one of the reasons given is that he did not think him fit to be trusted. Is it, then, probable that he urged him to go to the hospital and there bring out his (Dr. Jackson's) great discovery? But James McIntire was also present on the 1st of October, when Dr. Morton returned and advised Dr. Jackson of the entire success of the experiment, and he says not a word of Dr. Jackson proposing to Dr. Morton to try an experiment in the hospital. Your committee has already remarked in several other points of difference in the testimony of these two witnesses, and in each case, as in this, they felt themselves constrained by the testimony of other witnesses, and by the inherent character of the evidence, to rely on the accuracy of McIntire rather than of Mr. Barnes, where these discrepancies occur.

"Another difficulty in sustaining the position assumed by Dr. Jackson forcibly impresses itself upon your committee. According to this, on the 10th of September, Dr. Jackson intrusted Dr. Morton with his discovery, and not only offered him, but '*earnestly urged*' him to use it, assuring him it was perfectly safe. Dr. Morton tried it on the same evening; his success was complete; he brought to Dr. Jackson the next morning conclusive evidence of all this, and Dr. Jackson refused him a certificate because he would not '*make himself responsible for anything and everything Morton in his ignorance might do with an agent liable to the most dangerous abuse,*' while nothing is shown to shake Dr. Jackson's confidence in Dr. Morton since the previous day, or at all to change his opinion of him, except the triumphant success of the operation which he reported and proved. On the 16th of October the first operation was performed at the hospital, at which, as we have already shown, Dr. Jackson did not attend, and at which his name was not known. The second operation at the hospital took place on the 17th, Dr. Jackson taking no part in it by his presence or his counsel. Both operations were entirely successful, and both conducted on the part of Dr. Morton to the entire satisfaction of the surgeons of the hospital. But at this time Dr. Jackson's confidence in Dr. Morton, if he ever did confide in him, is wholly gone. He denies, in the conversation with his neighbor and friend, Caleb Eddy, that under the influence of ether the flesh of a patient can be cut without pain; says Morton '*is a reckless man for using it as he has; the chance that he will kill somebody yet;*' and in the interval between the 30th of September and about the 24th of October, he declared that he did not care what Morton did with it, or how much Morton advertised, if his own name was not known in with it.

"It would seem that as Dr. Morton acquired eclat by his constant success, as he continually and rapidly rose in the estimation of other scientific men, he has continually and as rapidly sunk in the estimation of Dr. Jackson. The evidence

of Francis Whitman, Mr. Caleb Eddy, and Hon. Edward Warren, show the prior and up to the 23d of October, Dr. Jackson spoke doubtingly of the effect of ether, and condemned its use; and there is no proof whatever that, with that time, he lent the slightest countenance to Dr. Morton to sustain the discovery, and all his remarks, except those stated by Mr. Hitchcock to have been made to him on the 2d and 3d of October, tend to create distrust and destroy confidence both in the operator and the agent used.* His favorable mention

* His conversation with Dr. Gould about the same time is to the same effect. Dr. Gould says :

6th. Please to state your first conversation with Dr. C. T. Jackson respecting the discovery of ether as an anæsthetic agent, how it arose, and the circumstances relating there.

Answer. I have no recollection of what led to the conversation, and an indistinct recollection of precisely what was said. I alluded to the dental operations performed by Dr. Morton under the influence of ether. It was probably three days after the first dental operation he said "yes, I told him. It is sulphurine ether." I can't recollect anything definite. I recollect various things which were said, but I can't say whether they occurred at that interview or not. In substance he said, "*Well, let him go on with it; I don't care what he does with it, if he don't bring my name in with it*" I had but little conversation with him that time, as I thought he seemed to disclaim having anything to do with it, further than having mentioned that article to Dr. Morton.

7th. At the time he said this had there been any surgical operation performed under the effect of ether at the hospital?

Answer. No, sir.

The conversation of Dr. Jackson with Peleg W. Chandler, esq., although somewhat local and indefinite, carries with it conviction. It occurred at a meeting of the Warren Club, the house of the late Abbot Lawrence. We give here a part of his examination, applicable to this point :

1st. Are you, and how long have you been, of the Boston bar? What public office have you held? What have you held within the last ten years? At what college did you graduate?

Answer. I am a member of the Boston bar, and have been since 1837. I am clerk and solicitor of the city of Boston. In 1844-'5-'6, I was a member of the Massachusetts legislature for the city of Boston; in 1843, for three years, I was a member of the city council, and president of it for two years; I was commissioner in bankruptcy under the late bankrupt law of the United States, while that was in force. I graduated at Bowdoin College, in Maine.

2d. When did you first hear of the ether discovery? Please state the circumstances.

Answer. The first time I ever heard of the application of ether to surgical operations was from the lips of Dr. Charles T. Jackson. It was at the Warren Club, I think—an association of gentlemen where scientific matters were frequently discussed. I had heard mention made of some new discovery around the room, which seemed to make considerable impression, and I, or some one near me, asked Dr. Jackson, who was present, what it was. He then stated to me, and, I think, one other gentleman—we were standing by ourselves—that some time previously Dr. Morton, a dentist of this city, came to him to borrow a gas bag, and stated that he had an idea of filling it with atmospheric air, in order to work upon the imaginations of nervous patients, and induce them to submit to dental operations more readily; that Morton mentioned some experiment in France upon a soldier who had been condemned to death, who had been induced to believe that his blood was running, while he had such an effect upon his imagination as to have killed him actually; that he (Jackson) told him that that was a very pretty story, but there was no truth in it—and then asked Morton why he did not try ether; that some time after this Morton came to him (Jackson) in a state of great excitement, half crazy, I think, was his expression, and said that he had found it, or had hit upon it, or words of that import—I am not positive as to the expression. Dr. Jackson then said that it appeared, from Morton's statement, that he shut himself into a room and inhaled ether from a handkerchief, and found, by examining his watch before and after, that he had been insensible for some minutes, or had lost a few minutes. Dr. Jackson said that he subsequently told Dr. Morton that he should charge him five hundred dollars; that he finally compromised it with Morton, by agreeing to give him ten per cent., or something, I think, on patent rights for this matter; and I think Dr. Jackson added, with a smile, that he thought he should do better, or make more out of it than if he had taken the five hundred. There was more conversation, but I do not remember the exact language; but I can state very decidedly what the impression was which was made on my own mind at the time, and that was, that Dr. Jackson regarded this

to Dr. Keep occurred *after* the 26th of October, the actual date not fixed, and as accompanied with a strong general charge of ignorance and recklessness against Morton, who was then in the full tide of successful experiment. This state of facts is, in the opinion of your committee, wholly inconsistent with the assumption that Dr. Jackson was the discoverer; that he employed Dr. Morton to bring out the discovery; and that the experiments of Morton were tried on the responsibility of Dr. Jackson."

The error into which Dr. Jackson has fallen, as to the extent of the concessions which have been made him *by all* who have examined the evidence, is new and remarkable, in view of the reasonings and conclusions of these two reliable reports upon the distinct points which he claims to have been universally conceded—while neither of them finds it necessary to approach or touch what he avers to be "the only points contested by" his "opponents," namely, (to use his own words,) "that I had not a sufficient reason for *drawing the inference that I did—as they admit, drawn from my data.*" "And again, that by inducing an ignorant dentist—a man of no medical knowledge—to perform the mere mechanical operations made by my advice, and upon my medical responsibility, expressly assumed before witnesses, that I made him a copartner or joint discoverer, and that *he* made the first application of my discovery."

Your committee have looked in vain through all the papers before them; and find no such *admission*; nor do they find the controversy anywhere to turn upon at Dr. Jackson, in this paper, avers to be the "*only points contested.*" On the contrary, they find it denied, and to have been all along denied, that Dr. Jackson drew the *alleged inference*, or in any other manner *made the discovery*; that he employed or engaged Dr. Morton to administer the ether vapor on his (Dr. Jackson's) responsibility.⁴ These are questions which your committee

regard as a settled thing, or not as a discovery that was to be anything remarkable in itself, or that was likely to be applied beneficially, in itself considered, but as rather opening the door to future investigation in that direction, that something might hereafter be discovered that would stand the test of science and practical experience. There was an obvious desire not to connect himself, as a man of science, with it to any great extent; and he made use of some expression of this sort with regard to Dr. Morton, that he was a reckless, dare-devil fellow, and that he would kill somebody yet. I think that was his very impression. This was the substance of the conversation. I merely asked to see what the effect was, as there was a sort of buzz about the room in reference to something that had occurred up.

Q. Did Dr. Jackson say that he had told Dr. Morton, or predicted to him, what the effect of the ether would be?

A. No; I think all that was said about ether by Dr. Jackson was, "*Why don't you try ether?*" I am very confident. I don't mean to say that I understood Dr. Jackson as telling all he had said to Dr. Morton.

Q. From anything which Dr. Jackson said, did you get the impression that he had declared, before his interview with Morton, or believed at the time of his statement to you, that total insensibility could be produced?

A. I objected to, as the impressions of witness. J. P. P.)

Q. Answer No; I did not so understand it. I thought Dr. Jackson meant to tell Dr. Morton that every man of science or liberal education knew, that ether had some effect. I understood him as merely intending to ask Dr. Morton why he did not try ether, as the best thing for the purpose which he knew of, and likely to have more effect than air.

A. On the contrary, he carefully and absolutely avoided all connexion with, and denied responsibility for, the issue of the experiment until repeated public trials had proved successful. The following extract, from the testimony of Dr. Warren, is conclusive of the fact. Dr. Jackson's claim, as he is proved to have made it after its first success, was only that he "*suggested*" it, leaving the "*whole responsibility*" on Dr. Morton:

Q. 2d. Do you recollect a conversation between yourself, Dr. Gould, and Dr. C. T. Jackson respecting this discovery, about the time of the operations of November 7? When was this?

A. Answer. I recollect it perfectly well; it took place at a meeting of the Thursday Evening Club, at my house, about the time of the introduction of ether as an anæsthetic. Gould and myself were engaged in conversation on the subject of the recent surgical

find to be *the questions in issue*, and which have been, from the first claim made by Dr. Jackson, in issue. This erroneous statement somewhat weakens the credit of the paper for accuracy, but it is to be regretted only in so far as it misled the distinguished apostle of science in a foreign land to whom it was directed.

Dr. Jackson's first claim to the discovery, which appears on paper, is in a letter addressed to M. Elie de Beaumont, dated Boston, November 13, 1846, which was opened and read to the Academy of Arts and Sciences at Paris, at their meeting, January 18, 1847. It is thus introduced:

"M. Elie de Beaumont requested the opening of a sealed packet which had been deposited at the meeting of the 28th of December, 1846, and which contained two letters from Mr. Jackson, of which the following are extracts. First letter

"BOSTON, November 13, 1846.

"I request permission to communicate through your medium to the Academy of Sciences a discovery which I have made, and which I believe important for the relief of suffering humanity, as well as of great value to the surgical profession. Five or six years ago I noticed the peculiar state of insensibility into which the nervous system is thrown by the inhalation of the vapor of pure sulphuric ether, which I respired abundantly; first, by way of experiment, and afterwards when I had a severe catarrh, caused by the inhalation of chlorine gas. I have latterly made a useful application of this fact, by persuading a dentist of this city to administer the vapor of ether to his patients, when about to undergo the operation of extraction of teeth. It was observed that persons suffered no pain in the operation, and that no inconvenience resulted from the administration of the vapor."

In a second letter, of December 1, 1846, Dr. Jackson authorizes the opening of the above letter. The following is an extract from it, and the explanatory remarks of M. Velpeau:

"DECEMBER 1, 1846.

"The advantage of the appreciation of the vapor of ether has been completely established in this country, and the agent has been used with great success at the Massachusetts General Hospital."

On this point M. Velpeau made the following remarks:

"The secret contained in the note which has been read is no longer a secret. The medical journals published in America and England have divulged it in the months of November and December. A letter from Dr. Warren, of Boston

operations for anaesthesia. While we were conversing Dr. Jackson approached, on which Dr. Gould said, 'There is Dr. Jackson; he knows more about it than I do.' Whereon, turned to Dr. Jackson, and asked him what he knew about the use of ether as an anaesthetic. 'Oh,' said he, 'I was the person who suggested the use of it to Morton;' and added, either then or afterwards, 'I advised him to go to you and get you to do some surgical operations with it, otherwise he might kill somebody, and then he would have the whole responsibility,' or words to that effect. This is all I recollect of that conversation.

"43d. By 'afterwards,' do you mean the same evening or a future time?

"Answer. A future time. I could not say whether it was that evening or subsequently."

"44th. Was this or not the first communication you had had with Dr. C. T. Jackson on the subject of ether or any anaesthetic agent?

"Answer. It was the first.

"51st. Before this conversation with Dr. Gould and Dr. Jackson to which you have referred, had you any suspicion that Dr. Jackson had any part in this discovery, or of particular interest in it? (Objected to, as inquiring of the suspicion of witness.)

"Answer. I had not.

"52d. Before this conversation with Dr. Gould, at your house, to which you have referred, had you or not, in any way, associated Dr. Jackson's name with this discovery these experiments?

"Answer. Not that I recollect."

communicated the information to me more than one month ago; and Dr. Willis Fisher, of the same city, proposed that I should try its effects at La Charité towards the middle of last December."

The present object of quoting these letters is to show the account which Dr. Jackson then gave of his experiment in 1841-'42. It, in truth, goes no further than prior experiments had made familiar to the medical faculty. The Edinburgh Medical Journal of April 1, 1847, speaking of it, says:

"In the administration of ether vapor there is therefore nothing new. Its narcotic and anodyne effects have been long well known to experienced and well-informed observers. The application of ether vapor, nevertheless, as an anodyne, previous to surgical operations, suggested a mode of exhibition which, besides being new, has the merit of being more efficient than the methods in ordinary cases."

Dr. Jackson's trial, in 1841-'42, as stated by him in the above letter, was a mere application of its well-known narcotic and anodyne properties. In a paper published by Dr. Jackson in the Boston Daily Advertiser of March 1, 1847, he refers to the statement in his letter to M. Elie de Beaumont but one distinct fact—relief from the pain of his catarrh during the effect of the inhalation of the vapor sulphuric ether, and its return presently afterwards. The same fact is stated as having occurred in Dr. Thornton's practice, first published in 1795-'96.

In a letter written by Dr. Jackson to Dr. Martin Gay, dated May 1, 1847, he professes to give an account of his "experiments and observations made several years ago on the inhalation of the vapor of pure sulphuric ether." He details his experiments as follows: The first:

"I moistened a cloth and laid it over my mouth and nostrils, and laid myself back in a rocking-chair, and inhaled the vapor, noticing its effects upon the system. The first impression was that of coolness, then a sensation of warmth and exhilaration, with a singular feeling of excitement in the chest. This was followed by a loss of consciousness, from which I in a short time awoke. Soon afterwards I entirely recovered from the effects of the ether."

The second:

"Afterwards, still suffering from the effects of the chlorine, I thought I would breathe the ether vapor again, and for a longer time. I went, therefore, into my room, which is connected with my house, and taking the bottle of pure sulphuric ether from the laboratory, I soaked a folded cloth in it, squeezed it out slightly, and seating myself in a rocking-chair, with my feet resting upon another chair, commenced inhaling the ether from the cloth, which was placed over my mouth and nostrils, while my head was laid back against my chair, so that I was quite at ease in a fixed position. The effects of the inhalation were as before described, excepting that it made me cough at first. I was therefore led to believe that the paralysis of the nerves of sensation would be so great during continuance of the insensibility that a surgical operation might be performed on a patient under its influence without giving him any pain, for the loss of consciousness was remarkable, perhaps resembling that of epilepsy more than any other kind of insensibility."

On the 18th of May, 1848, something more than a year afterwards, the course about the discovery all the time going sharply on, and new facts daily developing themselves in the use and effects of sulphuric ether, Dr. Jackson addressed a letter to Joseph Hale Abbott, esq., giving, as he says, "a more accurate statement than I have heretofore published of the effects produced upon the system by sulphuric ether when I inhaled it for relief from the distress occasioned by the inhalation of chlorine in the winter of 1841-'42, and also a statement of the precise ground, which I have never published, of the idea then conceived

by me that pure sulphuric ether could be used with safety and success to prevent pain in surgical operations.

"I will add that in my published letter to Dr. Gay I neglected, through inadvertence, to state one of my principal reasons, which, as will be seen by this pamphlet, I had mentioned to him in conversation, for the inference I drew from my observations. The experiment referred to above, in the course of which I observed that sulphuric ether produced insensibility to pain, was as follows: Having taken a bottle of pure sulphuric ether from my laboratory I went into my office, soaked a folded cloth with it, squeezed it out slightly and seated myself in a rocking-chair. Having laid my head back against the rocking-chair, with my feet supported by another, so as to give me a fixed position, I placed the cloth over my mouth and nostrils, and commenced inhaling the ether. The effects perceived by me were at first a little coughing, a sensation of coldness, then warmth and fullness of the head and chest, exhilaration and giddiness, numbness and want of feeling in the feet and legs, a swimming sensation, as if I had been afloat in the air, together with a loss of all feeling in the rocking-chair in which I was seated, loss of all sensation of pain in the throat and chest, a state of reverie, and soon entire unconsciousness, for a space of time unknown to me. Recovering, I felt a sense of giddiness, but with a desire to move; found the cloth I had moistened with ether had dropped from my mouth; had no feeling of pain in the throat and chest, but began to feel a strange thrilling in the body. In a short time I felt the soreness in the throat gradually returning, and the distress in the chest also, though much less than had been before. From the cessation of all pain, and the loss of all feeling of external objects, a little while *before* and *after* the loss of entire consciousness I was led to infer that the paralysis of the nerves of sensation would be great during the continuance of the unconsciousness and the total loss of feeling, that a surgical operation could be performed upon a patient under the influence of ether without giving him any pain, and therefore I prescribed it with entire confidence in the result."

Next follows, on the 18th of December, 1851, the narrative to Baron Von Humboldt, above set forth, but to which your committee think proper to refer again specially in this connexion. After stating the accidental inhalation of chlorine gas, and the means used to destroy its effects, he says: "The next morning my throat was severely inflamed, and very painful, and I perceived a distinct flavor of chlorine in my breath, and my lungs were still much oppressed. I determined, therefore, to make a thorough trial of the ether vapor, and for this purpose went into my laboratory, which adjoins my house in Somerset street, and made the experiment from which the discovery of anæsthesia was induced. I had a large supply of perfectly pure washed sulphuric ether, which was prepared in the laboratory of my friend, Mr. John H. Blake, of Boston. I took a bottle of that ether and a folded towel, and seating myself in a rocking-chair and placing my feet in another chair, so as to secure a fixed position as I reclined backward in the one in which I was seated. Soaking the towel in the ether, I placed it over my nose and mouth, so as to inhale the ether mixed with the air, and began to inhale the vapor deeply into my lungs. At first the ether made me cough, but soon that irritability ceased, and I noticed a sense of coolness, followed by warmth; fullness of the head and chest, with giddiness and exhilaration; numbness of the feet and legs followed; a swimming or floating sensation, as if afloat in the air. This was accompanied with entire *loss of feeling*, even of contact with the chair in which I was seated. I noticed that *pain had ceased in my throat*, and the sensations which I had were of the most agreeable kind. Much pleased and excited, I continued the inhalation of the ether vapor, and soon fell into a dreamy state, and then became unconscious of all surrounding things. I know not how long I remained in that state, but suppose that it could not be less than a quarter of an hour, judging from the degree

lyness of the cloth, which during this state of unconsciousness had fallen from my mouth and nose, and lay upon my breast. As I became conscious, I observed still there was no feeling of pain in my throat, and my limbs were still deeply benumbed, as *if the nerves of sensation were fully paralyzed*. A strange brilliancy now began to be felt along the spine, but it was not in any way disagreeable. Little by little sensation began to manifest itself, first in the throat and body, and gradually extended to the extremities; but it was some time before full sensation returned, and my throat became really painful.

"Reflecting upon these phenomena, the idea flashed into my mind that *I had made the discovery I had so long a time been in quest of*—a means of rendering the nerves of sensation temporarily insensible to pain, so as to admit of the performance of a surgical operation on an individual without his suffering pain herefrom."

These statements would have been entitled to much more weight, in the estimation of your committee, if all the facts alleged to have been observed, and conclusions drawn, in 1841-'42, as stated in the letter to Baron Von Humboldt, of December 18, 1851, had appeared in the letter to Elie de Beaumont, of November 13, 1846, or even in that to Dr. Gay, of May 1, 1847; but such is by no means the case. Each successive letter states the case more strongly than the last preceding, and the facts superadded in the two last letters are those which alone give novelty and importance to the experiment.

In closing his statement of the last and final experiment in 1841-'42, in the part of the letter of December 18, 1851, to Baron Von Humboldt, last above set forth, Dr. Jackson says: "Reflecting upon these phenomena, the idea flashed into my mind that *I had made the discovery I had for so long a time been in quest of*—a means," &c. And he goes on to give, formally and in detail, the scientific deductions which he says were made at the time, and which then led him to the conclusion. If that statement be true, the discovery at that time, so far as private experiment and philosophical deduction could go, was as full and complete as it was on the morning of October 1, 1846, after Dr. Morton's successful operation on Eben Frost.

Now, if Dr. Jackson, in the winter of 1841-'42, did, in fact, make such discovery, and in earnestness, and in faith, and enthusiasm, was possessed with it, and with an animating desire to give it, and to give his name with it, to mankind, how happens it that no cotemporary written paper or pen-mark, under the hand of Dr. Jackson, or some one of his numerous friends or pupils, remains to attest the discovery? No private memorandum of his own, detailing his experiments and his scientific deductions from them; nothing, in case of sudden death, to connect his name with the discovery, and secure the discovery itself to the world.*

* On the contrary in his cotemporaneous letters to his correspondents abroad, down to the day before the operation at the hospital, he does not mention the subject.

On the 5th day of October, 1846, (that is, the very day before the operation at the hospital, and fifteen days after Morton had made his discovery,) Dr. Jackson wrote a letter to his friend and fellow geologist, Mr. Josiah D. Whitney, in which he gives him all the news of the day, speaks of a microscope, of the Lake Superior copper mines, the meeting of the association of American Geologists and Naturalists, and what papers were read before it, and even goes so far into minute and gossipy details as to write: "My house is at last completed, and so is the big Howard Athenæum, a brick and stone edifice of Gothic order. What a style for a theatre! Is it not ready for converting into a church? It is a handsome house, but there are now five theatres in Boston. What next? My family are all well, and now at home. The Plymouth life did them good. I have a fine lot of students," &c. And yet not one word is said in the letter of the momentous trial which was to take place on the ensuing day, and which had been instituted "*by Morton at his (Jackson's) urgent request*." Not a hint was dropped that he was then possessor of a secret to which the information that the "Pittsburgh Cliff mines have done very well," or the "Lake Superior

The paper above referred to, of November 13, 1846—written after the discovery had been in fact made, after the first capital operation had been successfully performed under the superintendence of Dr. Morton, and after Dr. Jackson had nearly made up his mind to claim the discovery as his own—was enclosed to M. Elie de Beaumont, with directions to file it in the Academy of Arts and Sciences of Paris, but not to break the seal until thereto directed. This paper, its seal and its custody, show that Dr. Jackson knew how to save a secret and yet preserve the evidence of a discovery; and it shows that he was not negligent or tardy, but hastened to take a formal contingent possession of this discovery in Europe before he witnessed, even as a spectator, a single operation under the influence of the new anæsthetic agent. It seems that he had not yet *fully* made up his mind to claim the discovery. He wanted further verification of the safety and efficacy of the anæsthetic agent before he took the decisive step of announcing it as his own. He therefore directed the letter making the claim to the discovery to be deposited, *sealed*, in the Academy of Arts and Sciences at Paris, not to be opened until he should direct.

The success of the pain-subduing agent between that day and the first of December, 1846, removed all doubt. The discovery was established. It already stood first in rank in the discoveries of the century, and fame, and honor and rewards awaited the discoverer. Dr. Jackson, on that day and under these circumstances, wrote the letter last above copied, to M. Elie de Beaumont, directing him to open the sealed packet, and publish him, Dr. Jackson, to Europe as the discoverer.

Considering the man and the discovery; the inestimable value of the discovery; the knowledge of the man, and his capacity to appreciate its value; his full appreciation of it when satisfied that the discovery was in fact made, and his eager promptitude in then seizing and appropriating it to himself, your committee cannot believe it possible that he should have been for a long time in earnest pursuit of the discovery; that he should have made it and perfected it in 1841-'42 by experiment and deduction; that he should, for nearly five years, have been in possession of it, and with his full estimate of its value; and yet that he should not, in its inception or progress, *record it*, somewhere, at some time, on something more fixed and reliable than mere frail, uncertain, and mutable memory.

He knew well, if he thought on the subject at all, that but a thin veil separated the familiar and daily walks of the faculty from the spot where lay his hidden treasure. Did he not fear that some one would lift the veil? He knew it was but a step, and that a short one, from what was well known to the discovery itself. Did he not fear that some one would take that step and seize the prize which he could then so easily secure to himself forever? If he made the discovery in 1841-'42, and was not yet prepared to disclose it, there was reason then for placing in the archives of some European and some American academy

Company has acted like the d—l, or worse," and the many other items of which his long letter was composed, are but trifles.

And yet that he did consider it of sufficient importance to write to him about, the many letters which he sent to Mr. Whitney after the public announcement fully confirm. Every letter sent to Mr. Whitney in the latter part of November, and in December, is full of assertions and statements concerning this very ether discovery, which prove the importance and value which he really attached to it. Is not this singular omission on the part of Dr. Jackson to notify one of his most intimate friends, and the person, as will be seen by other letters, in the course of this work, upon whom he relied to establish his claim, a very fundamental to the letter written by Dr. Wells to Morton, and copied, when speaking of the Wells claim? In one case we have a letter written on the day *before* the public trial, in which no allusion is made to it, or to the discovery. In the other case the letter is written four days *after* it. Verily, the pen is mightier than the sword, and often declares and proves a truth, by unexpected means, which no fear of the latter instrument could ever force a recognition of.

sealed paper, giving an account of the facts observed, and the deductions drawn at the time, that this much at least might be beyond the reach of rivalry and chance. But was there any just reason for this when he committed the sealed letter above referred to to M. Elie de Beaumont? The discovery was public and in public use in Boston for more than a month before that letter was written and sealed. The packet ship that carried that letter bore also the news of the discovery to Europe. What secret did this paper contain, that it must be kept under seal until the next arrival from America? Nothing, surely, which was not public in Boston when the packet sailed; public also, of course, on board of the ship, and which must be public over all Europe within twenty-four hours after she should touch the Liverpool docks.

The sealed letter contained but one single secret not known over the European and American world, before it reached the hands of M. Elie de Beaumont, namely: that Dr. Charles T. Jackson claimed the discovery as his. And why did he not then avow it, and proclaim it, instead of requiring his claim to remain under the seal of secrecy till the next arrival? His letter of 1st December gives the reason. It advises M. Elie de Beaumont that the success of the newly discovered anæsthetic agent is complete, and directs him to open, therefore, the sealed packet, and disclose its contents to the academy. He did so; and Dr. Jackson was forthwith in possession of the discovery in Europe.

Until the first capital operation under the influence of the vapor of ether, which took place on the 7th of November, 1846, Dr. Jackson had evidently no fixed confidence in its success as an anæsthetic agent. Nor did this seem to satisfy him fully. Six days after this he sent his sealed statement to be deposited in the academy at Paris, and not until many more successful operations had been performed under the superintendence of Dr. Morton, and until the last doubt of the incredulous was removed, did he direct publication to be made of his claim to the discovery. It is not to be credited that he had already possessed this discovery for five years, and knew its value and felt the enthusiasm of the discoverer; that he held it, and believed in it, and rejoiced in it, for five years; and yet that no word or line was ever written by him or any one of his numerous confidential friends to him, or for him, until the letter of November 13, 1846, hinting even darkly at his possession of the mighty prize. And the difficulty is greatly increased when these striking facts are considered in connexion with this letter, embodying the first written statement of Dr. Jackson's alleged discovery. The accounts there given of his alleged experiments in 1841-'42 show no new discovery, but a mere repetition of a well-known prescription for its usual purpose, attended with effects also before that time well known. And the medical journals from the other side of the Atlantic, which returned with a review of the discovery, show this fact, and comprise all the merits of the discovery in the successful application of the vapor of sulphuric ether as an anæsthetic agent in an actual surgical operation. *These journals, with this criticism and judgment, had been in the hands of the American public more than a month before Dr. Jackson published his amended and extended statement of March 1, 1847, and more than three years before his letter of 18th December, 1851, to Baron Von Humboldt, the statement in which, if it be believed, supplies all deficiencies except the want of a public experiment, or one, at least, made in the presence of witnesses.* But it is strange, that statement be true, that Dr. Jackson, from 1841-'42, to September 30, 1846, never applied that crowning test; that after he professed to have perfected the discovery by philosophical experiment and induction, he suffered it to sleep for five years, during which time he never made another experiment of any kind on himself or on another person, or even on a domestic animal; that, from first to last, he never made an experiment of any kind in the presence of witnesses. Indeed, for several years prior to 30th September, 1846, the use of sulphuric ether appears to have ceased in his laboratory, for in his letter to

Baron Von Humboldt, giving his version of the interview with Dr. Morton on that day, he says :

"He (Morton) asked me to let him take the bottle of sulphuric ether which I had just shown him; but *since it had been standing in the laboratory for SOME YEARS, I feared it might have become deteriorated.* I therefore advised him to go to Mr. Burnett, one of our best apothecaries, and get some pure sulphuric ether."

Dr. Jackson evidently feels that the long delay, from 1841-'42 to 1846, in bringing out his alleged discovery, and the sudden and abrupt manner in which he professes to have placed it in the hands of a man whom he stigmatizes as an "*ignoramus*" and a "*quack*," require explanation; and in his letter to Baron Von Humboldt, he gives the following :

"It is obvious enough, to those who know the circumstances, why I engaged an ignorant man to introduce my discovery. I had already, before Mr. Morton came to Boston and set up as a dentist, endeavored to engage more responsible persons to make trial of the ether in their practice, but they declined doing so knowing that the medical and toxicological books declared it to be a *dangerous experiment*, while I *insisted that it was not dangerous.* They thought that in their medical capacity they would incur responsibility for any accidents that might happen to the patients, and hence feared to act."

If Dr. Jackson made, in truth, this great discovery in the winter of 1841-'42 and was conscious of its truth and its value, the above statement, in the opinion of your committee, falls far short of a sufficient explanation of the fact that he so long delayed announcing it to the world. According to him, the discovery was complete as soon as he awoke from the state of unconsciousness into which he had been brought by inhaling the ether vapor. All was complete, except to bring it out by an actual experiment in the presence of the surgical faculty—as complete, as far as he was concerned, as it was on the morning of the 30th of September, 1846. Now, can it be believed that during more than four years that intervened between the time of the alleged discovery and the public experiments of Dr. Morton, no available means offered themselves to Dr. Jackson to test it, and disclose it, and prove it to the world? He says, "And it is well known that the vapor of sulphuric ether was sometimes inhaled by the young men at college." Could he not, after this discovery, have been present, and after leading the way himself have induced some of them to inhale it until it produced insensibility? Could he not have himself inhaled it before his friends and associates of the hospital, and satisfied them of its safety by his speedy recovery, of its complete suspension of all sensibility to pain by usual tests with which he was familiar, or even something more decisive, as the actual cautery applied for an instant to some sensitive part? Conviction would have followed a simple and safe exhibition like this, and his associates—members of the faculty of the hospital—would not have hesitated to further test the discovery by surgical operations. Indeed, we cannot suppose that they would have hesitated to do so at once on his mere statement of the experiment upon himself, as given to Baron Von Humboldt, and his assurance that it produced anæsthesia, and was attended with no injurious effects. They did not hesitate to grant it to the representations of Dr. Morton, a young man almost a stranger to the faculty. Dr. Jackson, it seems, too, believed they would grant it thus readily, for he says he directed and urged Dr. Morton to go and ask it, to which he says Dr. Morton reluctantly consented; and Dr. Jackson gave him no written paper, and spoke no kind word in his behalf to any of the faculty. With the extraordinary facilities for bringing out such discovery which Dr. Jackson had at his very door; with his own high scientific position, which enabled him fully to com-

and then, your committee cannot believe that he made the discovery and was compelled by a kind of necessity so long to withhold it from the world. Dr. Jackson shows no such necessity. Nor can your committee believe that he had he secret, and held it, for any reason or from any motive, a buried talent for early five years; that he witnessed from time to time, during all that long period, the agony of the human frame under the tortures of the cautery, the scalpel, and the knife, and remained silent, while he had, and knew he had, overruling power over pain, and could banish it instantly with a breath.

But Dr. Jackson, in his own conduct and bearing in reference to this discovery, and its verification and presentation before the public, from the 30th of September, 1846, down to the time that it was fully established, proves that he was not and did not believe himself to be the discoverer. Giving Dr. Jackson the full benefit of the favorable opinion which he entertained of Dr. Morton before he had determined to become his competitor for the honor of the discovery, (which appears by his certificate, namely, that he was a young man of marked energy and intelligence, and very creditable acquirements in such branches of science as pertained to his profession,) still it is not within the range of probability that Dr. Jackson, had he possessed the discovery, would have intrusted him or any one else to test its merits in the manner and under the circumstances in which he professed to have intrusted it.

He unquestionably believed Dr. Morton ignorant of sulphuric ether, its properties, and its use, and supposed he had never thought of its application in the manner proposed. Surely he would not select a man, ignorant of the anæsthetic agent itself, to perform the delicate operation of first testing its efficacy and safety. He knew how much depended on its first exhibition, and he also knew that it required science and skill to render the experiment successful, and to avoid danger and disaster. Sulphuric ether would produce insensibility to pain; too little of it would make the experiment ineffectual and expose the operator to ridicule; too much, or the proper quantity unskillfully administered, would produce asphyxia, perhaps death. Under these circumstances, Dr. Jackson could not have trusted a young man without medical knowledge, and without the knowledge of sulphuric ether or its effects, to conduct his first great experiment, and he himself think it not worth his while to be present. But, according to his own statement, he gave to Dr. Morton no sufficient instruction corresponding with the mighty mission on which he was sent. He gave all the instruction which he saw fit to give in ten or fifteen minutes, he *walking*, and his pupil, according to his last statement, *capering* about the laboratory. He despatched him, however, on his mission of mercy to banish pain from the human race, and he himself quietly took his seat again in his laboratory, and troubled himself no further about the result.

Dr. Jackson, had he thought on the subject, knew well that the effects of ether vapor would be different on different persons, and even on the same person in different states of the system. Had he been about to bring out his own discovery, the crowning honor of his life, he would not only have attended in person to the skilful administration of the anæsthetic agent, but he would have been especially careful in the selection of a subject. On the contrary, if this was *his experiment*, he directed its trial on the worst subject conceivable—a *errous and refractory patient who refused to submit to an operation*. That was what Dr. Morton professed to have on hand, and in reference to which Dr. Jackson says he disclosed his discovery and gave directions for its application. The first operation was really performed on a fortunate subject, such a one as Dr. Jackson might well have selected; but he knew nothing of this, or of anything other and further than *the refractory patient*. But Dr. Morton returned to Dr. Jackson's laboratory the next day, and reported the success of the experiment. Dr. Jackson, according to the testimony of Barnes, one of his witnesses, is quite unmoved, and expresses no surprise, but advises, and, as Dr.

Jackson himself says, urged Dr. Morton to go to Dr. Warren and get his permission to try it in a capital case at the hospital. Now, if Dr. Jackson were really the discoverer, and had employed Dr. Morton to make the experiment *for him*, and as his agent, why did he send *him*, or advise or urge *him*, to go to the hospital at all? He refused him a written certificate that the anæsthetic agent which he used was harmless, because, as his former counsel, the Messrs. Lords, said for him, of an "unwillingness to figure in Morton's advertisements, and his prudence in refusing to make himself responsible for anything and everything Morton, in his ignorance, might do with an agent so liable to the most dangerous abuse." How came he, then, to trust Dr. Morton with this agent? Why did he urge him to go with it to the hospital? He says, in his letter to M. Elie de Beaumont, that the experiments in the hospital were his. He had his anæsthetic agent tested there in a capital experiment. He sent Dr. Morton to Dr. Warren to ask its admission into the hospital, and yet refused, Dr. Morton a written certificate of the safety of the agent because he would not "*make himself responsible.*" And who was responsible? We have no hesitation in saying that Dr. Jackson's claim to these experiments is unfounded, and his statements so far untrue, or he was guilty of bad faith towards Dr. Morton, and especially towards the faculty of the hospital.

But the question recurs, why did he urge Dr. Morton to go to the hospital at all? He does not pretend to have employed him as his sole and only agent to bring out his discovery. On the contrary, according to the statement of Barnes, his witness, Dr. Jackson, on the 1st of October, when applied to by Dr. Morton to keep the discovery secret, replied, "No; I will have no secrets with my professional brethren." He was under no obligations to Dr. Morton. Why did he send him to the hospital? He had trusted Dr. Morton in one case only. If he did not think it worth his while to attend at the hospital himself and see in person to the administration of the anæsthetic agent in a capital case, he might have trusted it to some one of the learned surgeons of the hospital, to whom he could in a few minutes' time have communicated all the information which he gave to Dr. Morton but the day before. He would then also have been freed from all responsibility, which, though refused *in writing*, he says was *assumed before witnesses*, for what, in the language of Dr. Jackson's counsel, "*Morton, in his ignorance and rashness, might do with an agent so liable to the most dangerous abuse.*" This would have been consistent. If he engaged a dentist to use his discovery when he should *extract a tooth*, would he not have engaged a surgeon to use it when he should *amputate a limb*? For what possible reason, if his statement be true, could he send the dentist, who was profoundly ignorant of his anæsthetic agent, to administer it in a capital surgical operation among learned and skilful men, and at the same time advise him how to disguise it so that they might not know what he was using? He was determined to have no secrets with his professional brethren, and that he would tell them all that he had told Dr. Morton; yet he put Dr. Morton in possession of a convenient means of disguising the agent, and keeping secret the *actual discovery*. This was consistent and right if it were Dr. Morton's discovery, but a self-contradiction on the instant, almost in the same breath, if it were his own. It is clear to us that at this time Dr. Jackson did not claim the discovery, but held himself in such position that he might at any moment assert an interest in, or repudiate and condemn it. Sometimes the experiments of Dr. Morton were successful, and Dr. Jackson spoke well of the discovery to a few special friends, as Mr. Hitchcock and Mr. Sumner. Sometimes the experiments were unfortunate, as in the case of the boy supposed to be poisoned, and Dr. Jackson doubted the success of the discovery, and censured Dr. Morton, as in his conversation with Caleb Eddy, Francis Whitman, and Dr. Gould.

"On the 16th of October," we repeat from the report, "the first operation was performed in the hospital, at which, as we have already shown, Dr. Jack-

son did not attend, and at which his name was not known. The second operation at the hospital took place on the 17th, Dr. Jackson taking no part in it by his presence or his counsel. Both operations were entirely successful, and both conducted on the part of Dr. Morton to the entire satisfaction of the surgeons of the hospital. But at this time Dr. Jackson's confidence in Dr. Morton, if he ever did confide in him, is wholly gone. He denies, in the conversation with his neighbor and friend, Caleb Eddy, that, under the influence of ether, the flesh of a patient can be cut without pain; says Morton 'is a reckless man for using it as he has; the chance is he will kill somebody yet.' And in the interval between the 30th of September and about the 23d of October he declared that he did not care what Morton did with it, or how much Morton advertised, if his own name was not drawn in with it.

"It would seem that as Dr. Morton acquired eclat by his constant success, as he continually and rapidly rose in the estimation of other scientific men, he as continually and as rapidly sunk in the estimation of Dr. Jackson. The evidence of Francis Whitman and Caleb Eddy show that, prior and up to the 23d of October, Dr. Jackson spoke doubtingly of the effect of ether, and condemned its use; and there is no proof whatever that, within that time, he lent the slightest countenance to Dr. Morton to sustain the discovery, and all his remarks, except those stated by Mr. Hitchcock to have been made to him on the 2d and 3d of October, tend to create distrust and destroy confidence both in the operator and the agent used. His favorable mention of it to Dr. Keep occurred after the 26th of October, (the actual date not fixed,) and was accompanied with a strong general charge of ignorance and recklessness against Morton, who was then in the full tide of successful experiment. This state of facts is, in the opinion of your committee, wholly inconsistent with the assumption that Dr. Jackson was the discoverer; that he had employed Dr. Morton to bring out the discovery; and that the experiments of Morton were tried on the responsibility of Dr. Jackson.

"On the 30th of September the first successful operation took place. On the 1st of October Dr. Morton applied to R. H. Eddy, agent for the patents, to aid him in procuring a patent for the discovery. Mr. Eddy took the case into consideration, and did not see Dr. Morton again until the 21st. In the mean time, Dr. Morton's experiments had been attended with the most flattering success. Two operations had been performed in the hospital to the entire satisfaction of the faculty, and the discovery had acquired a footing in the medical world; and prior to the 21st, (but the precise day is not stated,) Dr. Jackson had a conversation with Mr. Eddy, was informed of the application of Dr. Morton for a patent, and claimed that he had some connexion with Dr. Morton in making the discovery. He called on Dr. Morton on the 23d, and it was then arranged that Dr. Jackson was to have \$500 for the information he had given Dr. Morton, if ten per cent. on the proceeds of the patent would produce that amount.

"This arrangement between the parties, settled by and between themselves, in a private conference, proved by their subsequent conversation with Mr. Eddy, and not now denied, shows conclusively the view that each had of his respective participation in the discovery. It was, between them both, distinctly a business transaction—an affair of dollars and cents; and clearly Dr. Jackson called and introduced the conversation, not to assert his rights to the discovery; not to inquire as to its success, for of this public report had advised him; not to give any advice or caution as to its further use, but to claim a compensation in money for the advice and information he had given to Dr. Morton on the 30th of September; and \$500, if ten per cent. on the proceeds of the patent would produce it, was agreed upon as the sum to be paid for that information. This conversation and agreement is entirely consistent with the view we have thus far taken of the case, but it is wholly inexplicable on the ground assumed by Dr. Jackson."

This agreement being concluded, Dr. Jackson went home, as he himself admits, and charged Dr. Morton \$500 on his books for the information which he had given him. This is the first entry or pen-mark made by Dr. Jackson with regard to this discovery which has come to the knowledge of your committee. It is true Dr. Jackson insists that the arrangement, in pursuance of which the entry was made, was obtained from him by the falsehood and subtlety of Dr. Morton. The assertion is easily made, but of little value against the contradictory statement of Dr. Morton, and the whole sequence of facts going fully to sustain that statement. A written paper, signed by Dr. Jackson on the 27th of October, 1846, sustains the arrangement resulting in the entry by Dr. Jackson; but this, also, he attempts to invalidate, on the alleged ground that it was altered, without his knowledge or consent, by Mr. Eddy, the patent solicitor, after he had agreed to sign it, and before he signed it, and that thus a false paper was palmed upon him. This statement is also wholly unsupported, and at variance with proof and probability. The former committee, in speaking of the conversation testified to by Mr. Eddy, and the arrangement that Dr. Morton should pay Dr. Jackson \$500, if ten per cent. on the proceeds of sale would amount to it, say:

“But the representations and advice of Mr. Eddy, the common friend of the parties, modified their arrangement. He represented to Dr. Morton that Dr. Jackson, from having given him the information and advice spoken of on the 30th of September, was entitled to participate in the patent as a joint discoverer; that if he were not joined in the patent, the fact of his giving that information would be used to impeach the patent; and that if Dr. Jackson were joined as a patentee, his name, and his advice and assistance, would be useful in bringing out the discovery, and giving it celebrity. With these arguments Dr. Morton was satisfied, and consented that Dr. Jackson should be named as a joint discoverer in the patent. Mr. Eddy also advised with Dr. Jackson, who informed him that, ‘by the laws of the Massachusetts Medical Society, he would be prevented from joining with Dr. Morton in taking out a patent, as he would be expelled from the association if he did so. He further stated that he intended to make a professional charge of \$500 for the advice he had given him, and that Dr. Morton had acceded to this; that he did not wish his name coupled with Dr. Morton in any manner; that Dr. Morton might take out a patent, if he desired to do so, and do what he pleased with it.’ At a subsequent interview, prior to the 27th October, Mr. Eddy urged Dr. Jackson to waive his objections to associating with Dr. Morton, as ‘I was confident that he was mistaken in his views as to what would be the action of the medical association; that Dr. Morton could not properly take out a patent without him; and that by joining in the patent, he would, of a certainty, be obtaining credit as a discoverer; whereas, should he not do so, he might lose all credit, as in the case of the magnetic telegraph, which, I understood from Dr. Jackson, he had suggested to Professor Morse.’ The objection as to the medical society was removed on consultation with Dr. Gould. Dr. Jackson consented to join in the patent, and it was agreed that he should have ten per cent. of the proceeds for his interest in it.”

In settling the question to whom belongs the honor of the discovery, it is unimportant whether Dr. Jackson did or did not desire to give it freely to the world. Such desire, if he had it, did not make the discovery his; and if it were not in fact his, the desire is without merit. In one point of view only is the patent question and contest relevant, namely: to show what the parties understood of their several rights; nor would we touch upon that, after the above examination of the subject by the former committee of the House, but to add to it another item of evidence. After this controversy had arisen and waxed warm, on the — day of January, 1847, Messrs. Loring & Hays, the counsel

for Dr. Jackson, addressed a letter to Dr. Morton, of which the following is an extract :

"It seemed best that the differences between Dr. Jackson and yourself should not be made public; on the contrary, that it should be generally understood the difficulties were in the course of adjustment. * * * We have uniformly said, when inquired of, that we were making arrangements that we hoped would distribute the profits of the discovery in such a manner that would be satisfactory to all parties.

"Under the present circumstances of the case, we think the least that, in justice to yourself and Dr. Jackson, you can offer, is twenty-five per cent. of the profits arising from the invention, both at home and abroad, in settlement of his claim upon you. * * *

"It is our wish to settle this matter amicably, if possible. We hope you will see, by our suggestions, that we wish only to have a fair distribution of the profits of a discovery made among those who cannot, if they disagree, effectually sustain the patent, and which, if sustained, *promises to give to all parties large sums of money for their united co-operation.*"

The proposition was rejected by Dr. Morton. This transaction shows the view that the parties each entertained, at that time, of his rights in the discovery, and it does not, in the opinion of your committee, place Dr. Jackson in a favorable position to denounce the patent, in the profits of which he desired thus to participate, as "*an infamous speculation on human suffering.*"

The former committee proceed to say:

"Your committee do not feel that on this question of fact the parties ought to be bound by the legal conclusions of their common friend, Mr. Eddy, or by the papers which they executed in pursuance of his legal advice. But they do consider the communications made by them at the time to Mr. Eddy, the mutual agreement of the parties between themselves as touching the discovery, and the facts admitted by them on the consultation, as matter of the utmost importance and significance. A voluntary agreement took place between the parties on that day, of which both must have understood the full force and effect, and to which neither seems to have been, or probably could have been, impelled by advice or counsel. It was that the whole right to use the discovery under the patent should be and was assigned to Dr. Morton, he paying to Dr. Jackson ten per cent. on all sales for licenses.

"Your committee cannot here fail to remember the unqualified terms of contempt and reprobation in which Dr. Jackson had, during the preceding part of the month, down almost to the very date of this arrangement, spoken of Dr. Morton and his alleged ignorance and recklessness in the use of this agent. They cannot conceive it possible, if he felt himself to be the true discoverer, that he would, by solemn contract, relinquish all power over his discovery, and place it solely in the hands of a man of whom he thought so ill. Dr. Jackson indignantly repels the idea that it was done for the purpose of gain, and we think it could not be the case, as the pittance reserved to him, if he conceived himself the true discoverer, was despicably small. And how could he hope to acquire *fame* by abandoning the most important discovery of the age?—one which, if it were his, and if, under the auspices of his reputation, with his skill and science, it were presented to the world, could not fail to place him on the highest scientific and professional eminence. How could he hope to acquire fame by thus surrendering all control over the discovery, and placing it in the hands of such a man as he had represented and still represents Dr. Morton to be.

"A careful examination of the above detailed acts and conversations of the parties, down to the 27th of October, about which it would seem to your committee there could be no doubt, renders it clear, almost to demonstration, that neither Dr. Jackson nor Dr. Morton, nor any of those who had witnessed or aided in the operation, supposed that Dr. Jackson was entitled to the merit of

this discovery, or any other merit than that of having communicated important information to Dr. Morton; and if we trace the conduct of the parties further, this opinion is but confirmed.

"On the 7th of November a capital operation was performed by Dr. Hayward in the hospital, the patient being under the influence of sulphuric ether, administered by Dr. Morton. Dr. Warren, being informed by Dr. Jackson that he suggested the use of sulphuric ether to Dr. Morton, invited him to attend and administer the ether. He declined, for two reasons: one was, that he *was going out of town*; the other, that he could not do so consistently with his arrangements with Dr. Morton. So the first capital operation, under the influence of ether, was successfully performed, Dr. Jackson not yet thinking fit to attend. But in a communication published in the Boston Daily Advertiser of March 1, 1847, he says: 'I was desirous of testing the ether in a capital operation, and Dr. Warren politely consented to have the trial made; and its results proved entirely satisfactory, an amputation having been performed, under the influence of the ethereal vapor, without giving any pain to the patient.' It strikes the mind with some surprise that Dr. Jackson should claim this operation as an experiment made by him, at his request, and to satisfy himself of the efficacy of the 'ethereal vapor' in a capital operation, when the only connexion which he had with the operation was to decline attending it when specially invited. Indeed, so entirely did he omit to inform himself on the subject of this experiment, which he declares to be his, that in the above communication he names Dr. Warren as the surgeon who performed the operation, which was, in fact, performed by Dr. Hayward.

"Another surgical operation was performed at the Bromfield House on the 21st of November, the ether again administered by Dr. Morton. Dr. Jackson was then present for the first time, on invitation, but merely as a spectator. On the 2d of January, 1847, an operation was performed in the hospital, when Dr. Jackson attended, and brought with him a bag of oxygen gas, to relieve the patient from asphyxia in case it should supervene. Nothing of the kind occurred, and the gas was not used. This is the first and only act of Dr. Jackson's made known to your committee which implied that he had any duty to perform in the administration of the ether, or that he rested under any responsibility as to its effects."

Among the papers not heretofore presented, Dr. Jackson has brought before your committee a letter of George T. Dexter, dated December 19, 1851, in which the writer states that Dr. Jackson in the year 1842 communicated to him his discovery of sulphuric ether as an anæsthetic agent, and spoke of it freely, earnestly, and confidentially, as a means of alleviating much human suffering in surgical operations; that in the winter of 1842 the witness called on Dr. Jackson in his laboratory, who told him he continued his experiments with sulphuric ether, and that it was likely to prove all that he had anticipated, or more.

We hear nothing, however, from any other quarter of continued experiments by Dr. Jackson after that of the winter of 1841-'42. Dr. Jackson himself does not profess to have made any.

There is also a letter from D. J. Browne, who says that in 1845 Dr. Jackson stated to him that he had discovered in the vapor of pure sulphuric ether a preventive of pain in surgical operations, and that he spoke of its effects in such operations with *enthusiasm*. To both these gentlemen he made his communications in confidence, and no written statement of it appears from either of them until December, 1851, four years after the discovery was a subject of public contest, and not until after the scientific papers had been for nearly as long filled with the statements and evidence of the conflicting claimants. Without imputing any wilful aberration from truth to either of the above-named persons, your committee think it but just to remark that their evidence, so far as correct-

ness of memory is concerned, is entitled to much less weight than it would have been if given while the controversy was fresh and ripe, and before full publication. There is certainly great danger that a witness who has read with feelings of partiality the mass of evidence exhibited in this controversy, and the conflicting publications of the parties and their friends, will, when he attempts to relate a conversation relative to the subject, which occurred six or nine years ago, blend with his recollection of it the statements and the evidence which has been four years with it in his mind, and thus cause the one to be colored by or mistaken for the other. For reasons akin to this, the English courts of chancery will not permit a witness to be examined in a cause after publication of the evidence. And, in the opinion of your committee, this evidence weighs out as dust in the balance against the evidence growing out of the acts and missions of Dr. Jackson, which your committee have already considered. Dr. Jackson may have told these persons all that he wrote to M. Elie de Beaumont on the 13th of November, 1846, but even this your committee think improbable. He may have repeated in his own person the speculations of Dr. Beddoes and Sir Humphrey Davy, connected with the experiments of Dr. Townsend. Dr. Vells did this, and even more. This knowledge of these speculations had become the common possession of the medical mind, a common highway, in which it was not discovery to travel. And it involves no improbability to suppose that these persons were mistaken as to the *exact statement* that Dr. Jackson made them, and that it is colored and extended in their letters.

The last deposition of Dr. N. O. Keep, laid before the former committee of the House shortly before the coming in of their report, shows what wild freaks feeling and imagination sometimes play with human memory. He testifies as follows:

"I became associated in the business and practice of dentistry with Dr. Morton on the 28th day of November, in the year 1846. On the next day we were about to prepare an advertisement for publication, when Dr. Augustus A. Gould called at our rooms. Being pressed with business, I requested him to write the advertisement, with which request he complied. After he had written it, which he did at his own house, he brought it to me, and we read it together. In it the discovery of etherization, without any suggestion having been made by me to that effect, was ascribed in explicit terms to Dr. Charles T. Jackson. Dr. Gould, pointing with his finger to the words in which this ascription was expressed, said to me 'That will please Jackson.' I then showed the advertisement to Dr. Morton, and we read it together. He then exclaimed with emphasis, 'That is good; I like that; I'll take it to the printer.' Copies of the advertisement were made under the direction of Dr. Morton, and, as I supposed at the time, without alteration, and published by his order in three evening newspapers. On seeing the advertisement in the Evening Traveller, on the evening of the same day, I was greatly surprised to find that the words which ascribed the ether discovery to Dr. Jackson had been struck out. The next morning I called the attention of Dr. Morton to the fact, and asked him why he struck out those words. He hesitated, and seemed not to know what to say, when I said to him: 'Morton, why do you quarrel with Jackson? You injure yourself and injure the cause.' His reply was: 'I wouldn't if he would behave himself. The credit of the discovery belongs to Dr. Jackson; Jackson shall have the credit of it; I want to make money out of it.'"

"I stated the foregoing facts to my family on the aforesaid evening, and afterwards to other individuals. I have heretofore declined voluntarily testifying to them, but consider that I have no right, upon a call of such a nature as is now made upon me, to withhold the testimony.

"N. C. KEEP.

"BOSTON, February 8, 1849."

On this the former committee remark:

"When this deposition was received, the chairman of your committee showed it to Dr. Morton, who in a few minutes brought to him a bound book entitled 'Miscellaneous Notes.' On the 91st page was a manuscript in the handwriting of Dr. A. A. Gould, written evidently on the outside sheet of a letter addressed to Dr. A. A. G., and postmarked 'Washington city, D. C., July 9,' from all which it was most manifest that this was the original draft of the advertisement testified to by Dr. Keep. This paper, contrasted with the evidence of Dr. Keep as the contents of an original draft, fixes in the minds of your committee the just value of this species of evidence. The paper is as follows:

"The subscribers, having associated themselves in the business of dental surgery, would respectfully invite their friends to call on them at their rooms, No. 19 Tremont Row. They confidently believe that the increased facilities which their united experience will afford them of performing operations with elegance and despatch, and the additional advantage of having them performed without pain, by the use of the fluid recently invented by Doctors Jackson and Morton, will not only meet the wishes of their former patients, but secure to them additional patronage."

Your committee also examined the original paper, which is the subject of the above deposition, and are satisfied that it has never been altered by erasure or interlineation since it came from the hands of Dr. Gould. The entire narrative, therefore, of Dr. Keep that the paper originally conceded the whole merit of the discovery to Dr. Jackson, the conversation relating to *that*, the alteration by Dr. Morton before publication, the reproof given him by the witness, and Dr. Morton's reply, still insisting that the credit was due to Dr. Jackson, and that he should have it, is all shown to be false from beginning to end—the mere creation of an excited imagination—not an error in regard to the force of terms, as is probably the case in the two depositions considered above, but a statement which, by a fortunate reference made in it to a written paper, is proved to have no foundation whatsoever in truth.

Your committee cannot better present their views of the mass of evidence filed before the former committee of the House than by here embodying in its connexion so much of their report as relates to it. They say:

"The testimony of Don P. Wilson and J. E. Hunt, who were assistants in Dr. Morton's shop for a few months, commencing in November, 1846, is adduced to impeach the evidence of Leavitt, Spear, and Hayden, by *their* alleged declarations, and the title of Dr. Morton to the discovery, by *his* declarations. This is a species of testimony against which the books on evidence especially put us on our guard. It is a sweeping kind of evidence which covers everything, and if the imputed conversation be *private*, or if it be general, (as he 'often said,' or 'always said,') it is often difficult to subject the evidence to the ordinary tests of surrounding circumstances and inherent probability, so as to fix its value. There is enough, however, in these depositions to show that they are of but little weight. It is to be remembered, in the first place, that they are in direct contradiction to the testimony of Whitman, Spear, Leavitt, and Hayden, and they contradict by strong implication the testimony of Mr. Metcalf and Mr. Wightman, the character of all and each of whom is most satisfactorily vouched. The testimony of these two witnesses cannot be true, unless the first four above named entered into a conspiracy to carry a point by perjury; but, as to them, we have examined their evidence—we have tested it by its agreement with surrounding circumstances—and we are satisfied of its truth.

"This of itself would be enough to dispose of the testimony of Wilson and Hunt; but it is proper to look at the inherent character of their evidence.

"Wilson, in the commencement of his deposition, *swears*, by way of recital, that Dr. Charles T. Jackson was the discoverer of the application of ether to produce insensibility to pain in surgical operations; and, among other things,

he says, '*Morton first claimed the discovery to be his own,*' in February, 1847. 'To say nothing of the looseness and total want of caution with which the fact of the discovery is stated—a fact of which Mr. Wilson certainly had no knowledge whatever—he testifies directly against the recorded fact in the second particular, for Dr. Morton did *claim* the discovery as early as September 30, 1846, and his claim was given to the world the next day in the public prints. *His* claim, and *his* alone, was known to the surgeons of the hospital during the month of October, and his public circulars and the numerous answers to them, which he has exhibited to the committee, show that during all that time, and at all times, he claimed the discovery publicly and to the world as his own. The witness goes on to say: 'In the administration of the ether I was guided by, and solely relied upon, the advice and assurances of Dr. Jackson, received through Morton. *We never dared to follow Morton's own directions*—and adds that, if they had, the consequences would probably have been fatal, and etherization a failure. And further, that he never knew Morton '*to apply it to a patient in the office.*' This was from a most apparent fear and shunning of responsibility.'

"Now, as to the advice and assurances of Dr. Jackson, alleged to have been received from time to time through Dr. Morton, we have no reason to suppose that any such repeated intercourse and communication took place during that time, and we have no evidence of the actual fact of any such meeting and instructions. On the contrary, there is evidence of unkind feelings existing on Dr. Jackson's part towards Dr. Morton; and, in the opinion of your committee, the testimony of Dr. Keep *indirectly* contradicts the testimony of Wilson on that point, and *directly* upon each of the other points last named. Dr. Keep's object, and the tendency of his evidence, is to depreciate Dr. Morton; but for ails the very reverse of those with which he is charged by Wilson, namely, '*rash recklessness,*' instead of '*a most manifest fear of responsibility,*' in administering the ether; and he evidently is impressed with the belief, and designs to let it be known, that the success of etherization depended upon his skill and prudence. He says, '*it was his (Morton's) practice during that time to administer the ether without any adequate provision for the admission of atmospheric air; and whenever operations were performed by other persons in the office, and under his supervision, he directed the application in the same way, the consequence of which many of the operations were unsuccessful, and great stress and suffering were induced.*' Dr. Keep then states that he made ample provision for the admission of atmospheric air, and advised the assistants to do the same thing; but 'they being influenced by his (Morton's) directions and known wishes, did not at all times follow my advice.' Not a word is said by Dr. Keep of any advice or directions coming from Dr. Jackson, which, if it had actually occurred, must have been known to him, and would have formed an important item in the current incidents of the time. The evidence of these two witnesses is thus: 'They were in the office of Dr. Morton during the same 'thirty days'—Keep, the superior, Wilson, the assistant. Keep says Dr. Morton was in the habit of administering the ether in a particular manner, and that he was *rash and reckless.* Wilson says that he never administered it at all, and that he was *timid* and shrank from responsibility. But the surgeons of the hospital agree with neither one nor the other, but show that he repeatedly administered it the hospital *himself*, to their entire satisfaction, and with entire success. Wilson says the assistants in the office would not follow the directions of Dr. Morton, but relied upon such as were brought from Dr. Jackson. Keep says nothing about instructions from Dr. Jackson, but that the assistants in the office were influenced by the directions and known wishes of Dr. Morton, so that his salutary advice and remonstrances were often of no avail. Wilson says Dr. Morton complained to him, an assistant in his office, *very fully* all the particulars of the discovery and patent; but, to Dr. Keep, his partner, he extended no such con-

fidence. We leave these two depositions to be viewed in their strong contrast; and as to the testimony of Don P. Wilson, considering its inherent improbability, the suspicious nature of the species of testimony to which it belongs, the manner in which it is contradicted directly and indirectly by the evidence of Dr. Keep; and when we further consider that it is directly opposed to the evidence of Whitman, Spear, Leavitt, and Dr. Hayden, and indirectly to that of Metcalf and Wightman, and that it is also in direct conflict with numerous public printed cards and notices of the day, we feel that we cannot give it the slightest weight or consideration.

"The testimony of John E. Hunt is subject to the same objections with those of Don P. Wilson, and other objections which your committee will now proceed to notice. In order to bring out a declaration on the part of Spear, that he had never taken ether, he represents him as taking it one evening, and in the excitement produced by it seizing upon a countryman present and handling him roughly. The apology which Spear makes to the countryman is, 'this was the first time he had ever taken the ether;' not that it was the first time ether so affected him, or that the rudeness was committed under the influence of ether, but that it was the first time he had ever taken the ether—a fact which had little to do with the act of rudeness, and was a most irrelevant apology. But the inquiry thereupon made by Mr. Hunt is most remarkably inconsequent; he having heard Spear say that it was the first time he had ever taken ether, asks him if it 'ever affected him in the same way before.' Now, if he had been pressing Spear with a cross-examination in order to entrap him in some important admission, the inquiry might, perhaps, have been made; but it was then a matter of no importance whatever whether Spear had breathed the vapor of ether or not, and it becomes in the highest degree improbable that both branches of the conversation, so inconsistent with each other, actually occurred; and as the statement contradicts the testimony of so many respectable witnesses, and is in itself improbable, your committee do not feel bound to give it credence. Again, in a walk with Spear, Hunt gets from him a full disclosure of the discovery, and a statement that it belonged to Dr. Jackson. According to this, Dr. Morton got the requisite information and instructions from Dr. Jackson, came home, tried it on a woman, and it worked first rate; and he had since then continued to use it under the directions of Dr. Jackson. The evidence shows that Spear well knew that the experiment was not tried on a woman, but on a man whose certificate was read next day by hundreds in the city of Boston. But the witness evidently took this part of the story from the narrative of Don P. Wilson (whose deposition was taken on the same day) about the refractory female patient named in the conversation with Dr. Jackson on the 30th of September, who was to be cheated with atmospheric air administered from a gas-bag.

"From among the thousands with whom Dr. Morton communicated touching this discovery, during the winter of 1846 and 1847, some six or seven, with whom he had personal controversies, testify to his admissions that he was not the discoverer. They differ as to the degrees of directness and fullness with which he opened the matter to them, but it will be found, as your committee believe, to be a rule in this case, having no exception, that the more violent the hostility of the individual the more fiercely he assailed Dr. Morton's patent, the more free Morton became in his communication, and the more fully did he unbosom himself; and his statements always went directly to defeat his own claims and support the defence of the opponent to whom he made it. For example, H. S. Payne says 'that, in the early part of December, 1846, he commenced applying the vapor of ether to produce insensibility to pain in surgical operations. This was after I had heard of the discovery of the preparation by Charles T. Jackson, of the city of Boston.' He then states that Dr. Clarke purchased of Dr. Morton a right, under the patent, for Reusselaer and several adjoining counties, who sold to Dr. Bordell; and Dr. Payne was notified by Dr.

Blake, as the agent of Dr. Morton, to abandon the use of ether in his practice. After failing in an attempt at negotiation with Dr. Bordell he went to Boston and had an interview with Dr. Morton, who not once only, but repeatedly, declared that Dr. Jackson was the sole discoverer; 'that all the knowledge he possessed in relation to its properties and application came from Dr. Jackson, and that he never had any idea of applying sulphuric ether, or that sulphuric ether could be applied for the aforesaid purposes until Dr. Jackson had suggested it to him, and had given him full instructions.' This most frank communication raises at once a difficulty about the patent, which is obviously void if that statement be true; and Dr. Morton attempts to remove it by saying 'that he had been very fortunate in effecting an arrangement with Dr. Jackson before any one else had the opportunity, and that he was the first man to whom Dr. Jackson communicated the discovery.' And he adds: 'Dr. Morton again and again said that he was not in any way the discoverer of the new application of ether, but that the idea had been first communicated to him by Dr. Jackson, who was its discoverer, and that his (Dr. Morton's) interest in the patent was merely a purchased one; and, moreover, that he was very lucky in anticipating all other persons by first receiving so precious a discovery from the lips of Dr. Jackson.'

"After seeing the fullness and unreserved character of this important conversation, and the apparent earnestness with which Dr. Morton attempts to impress the fact that he had no participation whatever in the discovery, not satisfied with offering it to escape him inadvertently or even stating it once, but repeating it again' and 'again,' as if he were anxious to impress it, one could not but be surprised to know that Dr. Payne, before this conversation, had pirated this discovery, and set up for himself, bade defiance to Dr. Morton and his assignees, and on his return home published a card, in which he by no means denies that Dr. Morton discovered the thing which he and his assignees are using, but averring that his (Dr. Payne's) anodyne vapor, which in his affidavit he admits to be sulphuric ether, is not the invention of the great Dr. Morton, but an entirely superior article, and all persons must beware how they infringe on his rights.' And the more especially is it surprising when we reflect that this state of facts, which Dr. Morton took such unusual pains to repeat and to impress upon this his most determined opponent, would, if true, render the patent wholly void in his hands, and put his discovery entirely in the power of Dr. Payne and all others who should see fit to avail themselves of it. There can be no absolute proof that Dr. Morton did not make these statements, but it is clear that it was against his interest to make them; and there is also full proof that they are not true, and that they are in direct opposition to his numerous printed and published statements. They are not true; for, besides the six witnesses who testify directly or indirectly to the discovery in its inception and progress, it distinctly conflicts with the conversation of the parties and their mutual understanding on the 26th and 7th of October, as testified to by R. H. Eddy. It is in direct conflict with the claim promulgated by Dr. Morton, and received and accredited by the scientific gentlemen in the medical hospital who performed the operations testing the efficacy of the discovery.

"Dr. Warren says:

"*Boston, January 6, 1847.*

"I hereby declare and certify, to the best of my knowledge and recollection, that I never heard of the use of sulphuric ether by inhalation, as a means of alleviating the pains in surgical operations, until it was suggested by Dr. W. T. Morton in the latter part of October, 1846."

"Since the above date the whole surgical staff of the hospital have testified to the same effect."

"And alike opposed to all the numerous printed circulars which Dr. Morton and his agents had distributed and were then distributing in every part of the United States. It appears that prior to this date Dr. Morton's attention had been called to an opposing claim to the discovery, and to the experiments at the hospital, and he had taken a decided public stand against them, as witness his circular published the 20th day of November, 1846, and the note thereto attached:

"Dental operations without pain.

"BOSTON, November 20, 1846.

"Dr. Morton has made a great improvement in dental and surgical operations, for which letters patent have been granted by the government of the United States, and to secure which measures have been taken in foreign nations

"Having completed the necessary preparations for the purpose, and greatly enlarged his establishment, Dr. Morton respectfully announces to his friends and the public that he is now ready to afford every accommodation to persons requiring dental operations.

"His assistants and apartments are so numerous, and his entire arrangements on so superior a scale, that immediate and the best attention can be given to every case and in every branch of his profession.

"The success of this improvement has exceeded the most sanguine expectations, not only of himself and patients, but of the very skilful and distinguished surgeons who have performed operations with it at the Massachusetts General Hospital, and other places in Boston, or witnessed its use at his office, room No. 19 Tremont row.

"* * * Inasmuch as one or two persons have presumed to advertise my improvement as their own, and even issued notices to the effect that the applications of it at the hospital were made by them, and that the certificates of its efficacy and value were given to them by the surgeons of that institution, I feel it my duty to warn the public against such false and unwarrantable statements, and at the same time to caution all persons against making, aiding, or abetting, in any infringement of my rights, if they would avoid the trouble and cost of prosecutions and damages at law."

"And your committee do not think it credible that Dr. Morton, resting his claims to the discovery on the grounds which he did—having a most decided public opinion at home in his favor as the discoverer, having freshly tasted of the intoxicating draught of fame, and recently, in the public papers and in circulars, asserted his authorship of the discovery and defied his rivals—they do not think it credible that he should seize the first occasion which offered, in conversation with a most determined opponent, to declare the falsehood of all that he had written, published, and claimed—to disclaim the honor which the world so generally and freely accorded to him—confess away all his pecuniary rights under the patent, and even support his surrender, disclaimer, and sacrifice by a self-debasing assertion which he well knew was false. The improbability is too strong to allow it credit.

"But Dr. Payne says that in the early part of December, 1846, he commenced his operations with sulphuric ether, and that this was after he had heard of the discovery of Dr. Charles T. Jackson, of Boston. How he heard of the discovery of Dr. Jackson he does not say; surely not by the information of the scientific men of Boston, for they attributed the discovery to Dr. Morton; nor by the public prints, cards, and advertisements, for the name of Dr. Morton alone appeared there; and he says, in conclusion, that he was very much astonished in learning, some time after his visit to Boston, that Dr. Morton 'asserts any claim whatever' to the discovery, and this, after the publication and circulation of the notices, cards, and circulars of Dr. Morton, and after the witne

had long been engaged in an embittered contest with Dr. Morton and his assignees, and the publication of his (Dr. Payne's) card.*

"Dr. Allen Clarke, who also testifies to admissions by Dr. Morton, but much less strongly than Dr. Payne, and whose statement may well be the result of a misunderstanding, made the more decided by hostility to Dr. Morton, and a desire to defeat his patent, was the purchaser of a right, for which he gave his note for \$350. He at length determined not to pay the note, but to join in contesting the patent, and he expresses the opinion that, by keeping up the controversy for one year, the patent would be broken down. Dr. Blaisdell says: 'Clarke would not pay you, for he could get the use of the letheon for one year before you could get the license from them, and by that time they could ruin the sale of it there;' and he might well have added, and with it the discoverer; a very common fortune to men who render the most important services to their race.

"Time, and the reasonable limits of a report, will not allow your committee to dwell upon the few remaining items of kindred testimony. The weight and strength of them have been considered; and the residue, like them, are composed of alleged statements by Dr. Morton to persons with whom he then had, or has since had, personal controversies touching his discovery, and they are all in contradiction to the claims which Dr. Morton daily promulgated in print to the world. Those printed papers are, as your committee conceive, the best evidence of what Dr. Morton all that time claimed, and what he conceded; they are of the time and of the transaction; they do not admit of misstatement, misconstruction, or falsification; they are of unvarying and exact memory; and they speak the language of undoubted truth as to the *claims*, though not as to the *rights* of the author. His claims, contemporaneous with these papers, are what these witnesses attack. His *rights* we have already considered; and, as to the evidence of his *claims*, that which he insisted and said was his, the published papers stand against the testimony of these witnesses, as written or printed evidence against parol. His alleged confessions, made under the most improbable circumstances, are in direct contradiction to his printed circulars, daily and contemporaneously promulgated to the world. If, then, these alleged parol admissions stood against the printed and published papers, without anything beside to add strength to either, we could not, in our conscience, in weighing the conduct of men by rational probabilities, hesitate to give the decided preponderance to the printed over the parol evidence. But the parol evidence runs counter to all the leading facts in the case heretofore considered and established in the opinion of your committee, by the most indubitable proof, while the printed circulars and notices entirely agree with them, and make with them one uniform and consistent whole. The objects of the parties, their claims, their efforts, their purposes appear the same throughout. The deposition of A. Blaisdell is, however, worthy of especial comment. At the time he professes to have had the conversation in which Dr. Morton accords all the merit of the discovery to Dr. Jackson, he was the agent of Dr. Morton, spreading his circulars throughout the land; had taken care to send one of them to each and every surgeon dentist in New York; and yet now declares that he was especially

* "NOTICE.—Dr. Payne has just returned from Boston, and has only time now to give notice to his friends and the public, that in a day or two he will be able to show to the public that the anodyne vapor which he has used is not the invention of the great Dr. Morton, but an entirely superior article, and that he shall continue to use it. And all persons must beware how they intrude on his rights." Extract of a letter of Mr. F. Filley, attorney of Dr. A. Clarke, of Lansingburg, New York, to Dr. Morton's attorney of Boston: "As one Dr. H. J. Payne, dentist of the city of Troy, persists in the use of the apparatus and gas, and proclaims defiance to Dr. Morton and any of his assigns, Dr. Clarke is completely thwarted in his enjoyment of the rights secured to him by Dr. Morton. The conduct of Dr. Payne is particularly annoying."

charged with the information which he takes care to inculcate, that these circulars were all false in the most material point, and that the patent which he is selling is void by reason of that falsehood.* He was at the same time in habits of almost daily correspondence with Dr. Morton; and the difficulties which he met with occurred while he was absent, and it would most naturally have suggested itself to him to communicate them to Dr. Morton by letter, and in that way get his assent to obviate them by declaring Dr. Jackson the *sole discoverer*. But he does not do so; if he had, his letter and Dr. Morton's answer would have been in writing; and, then, if there truth were in the statement of those alleged admissions, there would have been one item of written evidence to support them. But this is wholly wanting. Blaisdell professes to have waited till his return to Boston, and then to have held a private conversation with Dr. Morton, who at once and eagerly admitted away his *whole claim*, both to money and reputation.

"It is remarkable that, in more than three months, during all which time these witnesses say Dr. Morton conceded to Dr. Jackson to merit of being the 'sole discoverer,' during all which time he was daily writing and almost daily publishing, there is not produced one line written by Dr. Morton, or written to him, countenancing the idea; nor is there one act of his which looks to such admission. A written admission, or an ambiguous paragraph in writing, which could be fairly construed into an admission, or a letter written to *him* during that time, which could be reasonably construed to refer to such admission, would be tenfold the value of all the parol testimony now presented of those admissions. Dr. Morton has shown to the committee several bound volumes of letters addressed to him upon this subject, all of which recognize him as the discoverer. Viewing these statements in this point of light, comparing them with the printed and published papers,† in which Dr. Morton contemporaneously and continually asserted his claims to the discovery, and finding them opposed, as they are, to the well-settled facts of the case already considered, they weigh, in our opinion, as dust in the balance, and in nowise affect the well-settled facts of the case." ‡

*Extract from A Blaisdell's letter to Dr. Morton, dated New York, December 29, 1846.—"I am sending one of your circulars to every dentist in New York."

New York, December 31, 1846—"I have sent a circular to every dentist in New York city, and written on the cover where I am to be found."

In a letter from Pittsburg, dated February 1, 1847, he writes: "I gave him a few circulars to give his neighbors." Remarks to the same effect occur in other letters.

October 26, 1846—"Dr. Morton has discovered a compound, by inhaling which a person is thrown into a sound sleep, and rendered insensible to pain," &c.

† "TO THE PUBLIC.—Dr. Morton, surgeon dentist, No. 19 Tremont row, Boston, hereby gives public notice that letters patent have been granted him by the government of the United States for his improvement, whereby pain may be prevented in dental and surgical operations."—(Boston Evening Transcript, November 20, 1846.)

"IMPORTANT INFORMATION FOR THE PUBLIC AT LARGE.—I do hereby give this public notice, and warn all persons against using my invention." "I am particularly desirous that my invention should not be abused or intrusted to ignorant or improper hands, or applied to nefarious purposes." "New York Express, Baltimore Patriot, United States (Philadelphia) Gazette, will please insert the above twice every week for four weeks, and send their bills to this office."—(In same paper, December 4, 1846)

‡ In answer to a communication by Dr. J. F. Flagg, in which he threatens to take possession of the invention, and in which he attributes the credit of it, if there was any, to Dr. C. T. Jackson, Dr. Morton says: "Unless he can show—and I do not know anybody else that can—that (to use his own words) it has been known and published for some years that the vapor of sulphuric ether would produce the visible effects now said to be discovered, then the invention is original"—(Boston Evening Transcript, December 10, 1846)

In a letter from Dr. Wells (Boston Post, April, 1847,) he makes the following extract from Dr. Morton's letter to him in the early part of October, 1846: "The letter which is thus introduced with my signature was written in answer to one which I received from Dr. Morton, who represented to me that he had discovered a compound."

"It may be irrelevant to remark that there is not, in all this mass of depositions and letters, any contemporaneous written paper supporting Dr. Jackson's claim to the discovery, or impugning Dr. Morton's—all is parol. Declarations made by Dr. Jackson asserting the claim, and declarations made by Dr. Morton, even in the heat of the controversy, to his most violent enemies, abandoning his claims and surrendering them to Dr. Jackson. But no written paper sustaining either. And where in two instances the statement of Dr. Jackson touches a paper written or signed by himself, he repudiates them as false, and as obtained by circumvention and fraud; because, if true, they disprove his claim. And in the instances in which the testimony of his witnesses, testifying to the admissions and abandonment of Dr. Morton, can be directly tested by written papers, they are thereby in every instance proved to be false. Your committee consider that species of parol evidence, made up of alleged declarations of the parties merely, unsupported by a single written paper, but contradicted by everything in writing which they touch, entitled to no weight whatever, against the well known and fully admitted acts of the parties in this case.

Of Dr. Jackson's acts, while the surgeons of the principal curative institution in New England—the Massachusetts General Hospital—were applying the critical test to a discovery which he now claims as his own, the committee have before them new evidence in the following letter, upon which they forbear to comment further than to remark how decidedly it confirms the conclusions at which they have already arrived.

Dr. Henry J. Bigelow, professor in Harvard University, and surgeon in the Massachusetts General Hospital, in answer to a letter of the Hon. George T. Davis, says :

"BOSTON, February 5, 1852.

"DEAR SIR: I beg to acknowledge the receipt of your letter, dated January 21, addressed to Dr. Hayward, Dr. Townsend, and myself, and containing the following extract from a written remonstrance of Dr. Charles T. Jackson, which has been laid before a committee of the House of Representatives :

"The cause of asphyxia, so commonly produced in the early administration of ether at the Massachusetts General Hospital, I traced directly to the employment of those valved inhalers. In the weakened state of respiratory action, under anæsthetic agents, the valves are not raised in attempts to breathe, and the patient is drowned by the pure ether or chloroform vapor. On the removal of the valve by my directions, asphyxia at once ceased to occur at the hospital, and I had no occasion to employ the oxygen gas to revive the patients, as I was requested to do by one of the eminent surgeons of that institution; for no asphyxia happened after my advice was followed, to throw aside the inhalers and use the sponge."

"In detailing as you request 'a precise recollection of facts upon these points so far as they fell under my personal observation,' I may say that, to the best of my knowledge, being very familiar with those early experiments at the hospital, generally administering the ether myself :

"1st. There was no more asphyxia then from ether than there is now.

"2d. There was certainly no period at which asphyxia at once ceased to occur at the hospital.

"3d. This alleged asphyxia had little or no connexion with any valves.

"4th. I never heard that any valves were suppressed, nor that Dr. Jackson suppressed them.

"5th. Asphyxia, as it then occurred, was of no great importance, and was dependent upon the same causes which sometimes produce it now.

"6th. When Dr. Jackson brought oxygen gas to the hospital nobody required

it; it was not used, nor has it been, to my knowledge, anywhere since used in this connexion.

"In reply to your inquiry how far Dr. Jackson personally superintended the early administration of ether at the hospital, I answer *not at all*. He not only exercised no superintendence at the hospital, assumed no responsibility, but actually did not come there for more than two months after ether was regularly in use in that institution.*

"I will venture to allude to another point, which is of no importance to anybody but myself. Yet it directly concerns me, and I should be glad of an opportunity to refer to it, in order to refute certain statements of Dr. Jackson. In a part of his 'remonstrance,' Dr. Jackson uses, as I am informed, the following words:

"The few medical gentlemen, or young surgeons, connected with the hospital, who have not fully recognized my rights in this discovery, are, I lament to say it, anxious to obtain a larger share of the glory than rightfully belongs to them; and one of them† * * * *

"Dr. H. J. Bigelow very distinctly claims the honor of being the first to promulgate this great discovery, the first to make the profession acquainted with it, he having stealthily published my discovery before I was ready to lay it before the public, and while I was temporarily absent from the city, by reading an account of it before two societies of which I was and am now a member—the Boston Society for Medical Improvement and the American Academy of Arts and Sciences—and afterwards published his paper in the Boston Medical and Surgical Journal, against my solemn protest and denunciation of it as false, unjust, and quackish. In that paper, a copy of the Journal containing which I send to you, please observe that the nature of the agent used is carefully concealed, and hence it is a mere quack advertisement.'

"The paper above alluded to was the first paper upon the newly-discovered effects of ether. It was intended by Dr. Morton, and did happen to be the instrument by which the discovery was announced to the profession and the world at large, both in this country, where it was attacked by the incredulous, and in Europe, where it was widely reprinted.

"This paper,‡ to quote a contemporary publication, was intended to be a narration of physiological facts observed by myself, with a few concluding remarks connected with the patent right. It was published more than five years ago, and those objections of Dr. Jackson's are now to me altogether new, and I believe they are also new to everybody else.

"It will only be necessary to state, in reply: 1st. That Dr. Jackson could not at that time, for the want of the requisite facts, have himself written this physiological paper. In fact, that nothing but his present assertion shows that he had either the intention or desire to do it, and that there was no reason whatever to consult him either in reading or writing the paper, or to suppose that he wished to be consulted.

"2d. That he read the paper before it was printed, and assented to its publication in print.

"1. One thing is very striking, Dr. Jackson never saw a single surgical or dental operation with ether until long after it was a confirmed discovery, and until weeks, if not months, after this paper was printed. As this paper was an account of the new physiological effects of ether, observed in Dr. Morton's and other experiments, Dr. Jackson, who saw none of these experiments, would have been unable to have made any communication to a society upon this point, even if he had wished to, for the simple reason that for two months he had not

* See Dr. Townsend, p. 355.

† A part of the argument here is a little loose and is omitted.

‡ Boston Medical and Surgical Journal, December, 1846.

the requisite materials, but nobody will now believe that he wished to make any such communication; he had, according to his own statement, kept the matter from the public for years, and we may reasonably infer that he would have done so till this day, if the disclosure had been left to him. And it is well known that he kept aloof for a long time from any public connexion with Dr. Morton or with either, while physiological papers were written by the dozen by other people, without any objection on his part.

"I should have been certainly most happy to have consulted Dr. Jackson had I any idea that, as he now pretends, he desired it; but even if I had done so, it is plain that he could have given me no information upon the subject which was under investigation, for he had no control whatever over Dr. Morton's experiments; he had never seen them, nor had he any authority to make use of them if he had seen them. The paper alluded to was not designed to promulgate old theory nor the suspicions of two years' standing, which Dr. Jackson claims, but new facts, and for these I applied to Dr. Morton. *He instituted the experiments; he had their sole control; he took the responsibility of them, while Dr. Jackson kept out of the way.*

"The application of ether for anæsthetic purposes was at that time supposed by everybody to be wholly in the hands of Dr. Morton. Dr. Morton, through the intervention of a friend of his, who was also a friend of my own, allowed me to take notes of these experiments for publication, and, as far as I know, I was the first person not connected with Dr. Morton's office, except Dr. Gould, who saw these experiments.

"As to Dr. Jackson's knowledge of the cases at the hospital, which are also detailed in my paper, Dr. Jackson did not come there till January 2, of the year after they occurred.

"2. When this paper was to be printed, a new element was to be introduced into it at the request of Dr. Morton; the question of patent, a delicate subject already mooted by the interested parties, and about which it was obviously proper that Dr. Jackson, who was interested in it, should be consulted. Though he might not care who prosecuted or announced the physiological experiments, the matter of patent was plainly a different question.

"I therefore sought an interview with Dr. Jackson, at his house, several times. Failing to find him, I left for him a verbal request that he would be present at a final conference at the house of Dr. Gould, where the paper was to be finally considered and adjusted before being printed, especially the few closing paragraphs, then for the first time appended to it, and relating to the question of patent.

"During this conference the door was flung open, and Dr. Jackson entered, exclaiming vociferously. He was quietly asked what might be the occasion of his excitement, and was requested to read the paper then upon the table and under discussion, and to see whether he did or did not approve it. Dr. Jackson examined the paper, and finding it to be of a strictly physiological character, touching very lightly the questions of patent and of discovery, he changed his tone, ceased to object, requested one or more alterations of the part bearing upon these latter questions, especially the suppression of a paper relating to the electric telegraph, and assented to the publication of the paper.

"This took place at the house of Dr. Gould, in Tremont street, on Sunday evening, three days before the publication referred to, and in the presence of Dr. Gould, Mr. Eddy, and Dr. Morton. Dr. Jackson assented to the publication of the paper as it then stood, and the conference was amicably terminated.

"This statement, together with the accompanying letters of Dr. Gould and Mr. Eddy, stating their recollection of the facts, may be compared with the above extract from Dr. Jackson's remonstrance.

"I have the honor to be, very respectfully, your obedient servant,

"HENRY J. BIGELOW."

Dr. Jackson, in his letter to Baron Von Humboldt, says :

"I at once appealed to the public, destroyed the bond given me by Mr. Morton, and made the use of ether in surgical operations free to all mankind."

The transaction of *destroying the bond* is somewhat ludicrous.

On the morning of the 26th May, 1847, more than five months after the patent had been taken out, after it had for some time become unavailable, and Dr. Morton had lost a good deal of money by it, Dr. Gay called at Dr. Morton's office, with a young gentleman in his company, and somewhat dramatically cancelled the bond. This was the bond that secured to Dr. Jackson ten per cent. on the net profits of the American patent. On the same day the anniversary of the Massachusetts Medical Society took place, and at the dinner, in the afternoon, Dr. Jackson made a speech, in which he claimed to have been entirely disinterested in his connexion with the discovery, and said he had destroyed the bond. He did not say that he had destroyed it that morning just in season for the speech, but we are permitted to infer that it was destroyed at a time when it had some value.

The inconsistency between these late claims for disinterestedness on the part of Dr. Jackson, and his unremitted efforts to obtain the utmost possible pecuniary advantage from the discovery, so long as there was any chance of it being profitable, is apparent to all.

So long as the discovery was under test, and its result was uncertain, Dr. Jackson is unseen and unheard. When it became evident, from the two experiments at the hospital, that the discovery was of value, at the close of October Dr. Jackson first appears, and then only for the purpose of claiming compensation of Dr. Morton for professional advice. He accepts five hundred dollars. His friend obtains for him ten per cent. of the net profits of the American patent. He next refuses to sign the European papers without receiving ten per cent. on the foreign patents. From this he rises to twenty per cent., and on the 28th of January he claims "twenty-five per cent. both at home and abroad, as the least that in justice" can be offered him; and his counsel, of course with his sanction, speaks of the patent as one which, "if sustained, promises to give to all parties large sums of money for their united co-operation." He opens negotiations with Dr. Morton, through Mr. Hayes, for obtaining a joint patent in France, by the instrumentality of M. de Beaumont, whose letters to Dr. Jackson on this point were shown to Dr. Morton. After all hope of pecuniary benefit from the patent is at an end, he cancels the bond, and with a strange forgetfulness of all his previous conduct, comes out in the character of one who disdains pecuniary compensation. Not only so, but he seems determined that Dr. Morton shall receive no compensation. On the 20th November, 1847, the physicians and surgeons of the hospital (with one exception) prepared a memorial to Congress, setting forth the importance of this discovery, and praying the government to make a payment "to those persons who shall be found, on investigation, to merit compensation," on condition that the patent be given up. Knowing that this would result in an official inquiry into the discovery, Dr. Morton promoted it to the utmost of his power. Dr. Jackson, on the other hand, remonstrated against it, on the professed ground that he would submit his claims to no tribunal, and that, as the sole discoverer, he wished no reward beyond the gratitude of mankind.

It is well known that an effort was made in London, by subscription, for donation to the discoverer of the effects of ether. By letters to gentlemen in this country from friends in London, we are informed that a sum, estimated at £10,000, was considered as secured; but the controversy and doubt created by Dr. Jackson's communications to the French Academy caused it to be abandoned.

Dr. Jackson speaks of Dr. Morton in terms of great bitterness. He assails his private character, declaring that it is infamous, and that in knowledge and

intellect he is an ignoramus and an imbecile, not only not possessed of science, but mentally incapable of acquiring it; and that, while administering his anæsthetic vapor to the patients at the hospital, he was offensive to the faculty by reason of ignorance and quackery. Much of his letter to Baron Von Humboldt, which he filed before the committee of 1852 as his answer, for this reason would not be suffered to remain on the files of a court of chancery, but would be stricken out for scandal and impertinence. Your committee utterly refused, as stated above, to receive evidence of general character, or of particular accusation or defence for or against either of the parties not relevant to the issue; but as the charges advanced by Dr. Jackson against Dr. Morton in the letter above must remain on the files of the House and be printed with the proceedings of the committee, they deem it but just to say that these charges are not only not supported by, but are utterly inconsistent with, the current proofs in his case.

The evidence presented with Dr. Wells's claim shows that dental operations were in several instances performed without pain by Dr. Wells under the influence of nitrous oxide, which had been before known in some cases to produce a total or partial asphyxia. It appears also that the vapor of sulphuric ether was thought of, discussed, and finally rejected by him; while the total abandonment of the use of nitrous oxide, and indeed of every other agent, shows that Dr. Wells's experiments were, on the whole, unsuccessful. He engaged in the search, and failed to find the object of his pursuit. He attempted and endeavored assiduously to carry out the idea to practical results, but was not successful. There was great merit in the effort, but it proved a failure.

Dr. Wells, therefore, in the opinion of your committee, is not entitled to the honor of the discovery. He stopped half-way in the pursuit. He had the great idea of producing insensibility to pain, but he did not verify it by successful experiments. He mistook the means, and he unfortunately rejected the true anæsthetic agent as dangerous to life, and therefore did not make the discovery and give it to mankind. He did what Dr. Beddoes, Sir Humphrey Davy, and Dr. Townsend had done about the close of the last century, but nothing more.

But he had the signal merit of reviving the investigation, and, probably, of attaining the discovery. If an idea connected with the subject lay dormant in the mind of any one, his attempt was well calculated to awaken it into life. When, in the fall of 1844, he made his public attempt, in Boston, to produce næsthesia during a dental operation, by the use of nitrous oxide, if Dr. Jackson had indeed made and perfected this discovery, and felt an abiding confidence in its truth, who can doubt that he would have availed himself of that occasion, or have been reminded by it, to make for himself another, at an early day, of publicly exhibiting and testing the true anæsthetic agent?

The question of discovery, which your committee has thus endeavored to examine, was every way proper to be tried and settled by intelligent men, as a jury of the vicinage, which was proposed by Dr. Morton and refused by Dr. Jackson. But it was finally tried by a most appropriate tribunal, the trustees of the Massachusetts General Hospital, at which the first public exhibition of its pain-destroying power was made, and where its effects were first witnessed by an admiring audience. The question of discovery was tried before these men—trustees of a scientific corporation, to whom Dr. Jackson was well known as a distinguished member of the medical faculty, and to whom Dr. Morton, prior to the discovery, and the contest to which it led, was known only as a young man of energy and enterprise. And this board, composed of men whose names would do honor to any scientific institution, presently after the discovery, at the time and at the place where it occurred, gave, by a unanimous voice, its honor to Dr. Morton. One year after they reviewed their decision, at the

request of Dr. Jackson, and unanimously confirmed it. In this connexion your committee deem it proper to introduce a letter from the honorable Secretary of State.

“WASHINGTON, *December 20, 1851.*”

“DEAR SIR: In reply to your letter of the 17th instant, I would say that having been called on, on a previous occasion, to examine the question of the discovery of the application of ether in surgical operations, I then formed the opinion which I have since seen no reason to change, that the merit of that great discovery belonged to you, and I had supposed that the reports of the trustees of the hospital and the committee of the House of Representatives of the United States were conclusive on this point.

“The gentlemen connected with the hospital are well known to me as of the highest character, and they possessed, at the time of the investigation, every facility for ascertaining all the facts in the case.

“The committee of the House were, I believe unanimous in awarding to you the merit of having made the first practical application of ether, and a majority, by their report, awarded to you the entire credit of the discovery.

“Very respectfully, your obedient servant,

“DANIEL WEBSTER.

“Dr. W. T. G. MORTON.”

Before this tribunal neither time, place, nor circumstance permitted bold and confident assertion to be mistaken for truth. With this award we think Dr. Jackson, Dr. Wells, and the scientific world should have been satisfied. It is, in the opinion of your committee, entitled to great weight. It was the *first*, and ought to have been the *only* contest. Our enlightened system of jurisprudence forbids, except under extraordinary circumstances, a *second trial of questions of fact*. It forbids it as a guard against the danger incident to repeated investigations, that truth will be overborne by artfully manufactured evidence.

Therefore, even if the evidence before your committee rendered the question of fact doubtful, which it does not, they would hesitate long before they would overrule the decision of the trustees of the Massachusetts General Hospital.

It is also a subject of much gratification to this committee to be able to concur in the opinion of the former committees of the House, from whose very able reports they have extracted so largely. They did not, however, feel themselves bound by either the one or the other, but gave the subject for themselves a full and careful consideration. But they are the more satisfied with the conclusions to which they have come because of their concurrence with such high and unexceptionable authorities.

Dr. Jackson appeals to the Academy of Arts and Sciences at Paris, and claims that that learned body has decided the question of discovery in his favor by awarding him the “Monthyon prize for the greatest medical discovery,” and that their decision ought to be taken as final and conclusive.

Your committee, for obvious reasons, would at once bow to the decision of that very learned society (the centre and soul of scientific knowledge in Europe) as to the fact of discovery, and that the honor of the discovery belonged to America, and also as to its merit and value among the discoveries of the age. But on the question, *Who was the discoverer?* their decision, if they made one, is entitled to much less weight. They are remote from the scene—had no means at an early day, of possessing themselves of the evidence—and we have already seen how the minds of the members of the academy were pre-occupied by Dr. Jackson’s sealed letter of November 13, 1846, and his letter of December 1, directing the seal of the former letter to be broken. The temporary secrecy

with the form and circumstance of the disclosure, together with his European reputation for science, were, in the absence of any conflicting evidence or claim, well calculated to make a first impression in his favor.

But the Academy of Arts and Sciences at Paris did not, as it appears, award to Dr. Jackson the honor of the discovery, either directly or indirectly, by awarding him "*the Monthyon prize for the greatest medical discovery.*" Your committee have inspected the official awardments exhibited by the parties, and find that the award to Dr. Jackson was "*one of the prizes of medicine and surgery of the Monthyon foundation.*" And M. Alexander Vattemare, in his letter to Dr. Morton, gives an extract from the formal decision made by that learned body, "between these two celebrated contestants," as follows:

"Mr. Jackson and Mr. Morton were necessary to each other. Without the earnestness, the preconceived idea, the courage, not to say the audacity of the latter, the fact observed by Mr. Jackson might have long remained unapplied; and but for the fact observed by Mr. Jackson, the idea of Mr. Morton might perhaps have been sterile and ineffectual." "Consequently, (he proceeds,) there has been awarded a prize of two thousand five hundred francs to Mr. Jackson for his observations and experiments upon the anæsthetic effects of sulphuric ether, and another of two thousand five hundred francs likewise to Mr. Morton, for having introduced the method in surgical practice after the indications of Mr. Jackson."

Dr. Morton has, within a few days, received the expression of the academy in the more acceptable form of their largest gold medal. The prize awarded to him, as above stated, being of an amount not absorbed by the medal, has been appropriately used in enclosing it in a suitable golden frame. On the one side of the medal, in addition to the name of the institute, is a medallion head of the Goddess of Liberty. On the reverse, surrounded by a wreath of laurel, is engraved—

"Académie des Sciences. Prix Monthyon, Médecine et Chirurgie, Concours de 1847 et 1848. Wm. T. G. Morton, 1850."

Upon a full examination of the whole case so far as time and means were afforded to your committee, they have come to the conclusion:

1st. That Dr. Horace Wells did not make any discovery of the anæsthetic properties of the vapor of sulphuric ether, which he himself considered reliable, and which he thought proper to give to the world. That his experiments were confined to nitrous oxide, but did not show it to be an efficient and reliable anæsthetic agent, proper to be used in surgical operations and in obstetrical cases.

For the rest your committee have come to the same conclusions that were arrived at by the trustees of the Massachusetts General Hospital at their meeting in January, 1848, and reconsidered and confirmed in 1849, and adopted by the former committee of the House, viz:

2d. That Doctor Jackson does not appear at any time to have made any discovery in regard to ether which was not in print in Great Britain some years before.

3d. That Doctor Morton, in 1846, discovered the facts before unknown, that ether would prevent the pain of surgical operations, and that it might be given in sufficient quantity to effect this purpose, without danger to life. He first established these facts by numerous operations on teeth, and afterwards induced the surgeons of the hospital to demonstrate its general applicability and importance in capital operations.

4th. That Doctor Jackson appears to have had the belief that a power in ether to prevent pain in dental operations would be discovered. He advised various persons to attempt the discovery, but neither they nor he took any measures to that end, and the world remained in entire ignorance of both the power and safety of ether until Doctor Morton made his experiments.

5th. That the whole agency of Doctor Jackson in the matter appears to consist only in his having made certain suggestions, which aided Doctor Morton to make the discovery—a discovery which had for some time been the object of his labors and researches.

Though it was but “a single step, and that a short one,” from the daily walks of science to this great discovery, yet the scientific world admits that the step was never taken prior to the 30th of September, 1846; and the discovery, when in fact made, was instantly appreciated and hailed by the surgical profession with the most exalted enthusiasm, almost with shouts of rapture. The committee have thought proper to annex the following extracts from the records of the Patent Office:

“I have therefore, in consideration of one dollar, to me in hand paid, the receipt whereof I do hereby acknowledge, assigned, set over, and conveyed, and by these presents do assign, set over, and convey to the said Morton and his legal representatives, all the right, title, and interest whatever which I possessed in the said invention or discovery, a specification of which I have this day signed and executed in conjunction with him, for the purpose of enabling him to procure a patent thereon.

“And I do hereby request the Commissioner of Patents to issue the patent to the said Morton *in his name*, and as my assignee or legal representative, to the extent of all my right, title, and interest whatever in the said invention or discovery.

“In testimony whereof, I have hereto set my signature and affixed my seal this twenty-seventh day of October, one thousand eight hundred and forty-six.

“CHARLES T. JACKSON.

“Witness: R. H. EDDY.”

Your committee cannot better conclude their report than by introducing the following extract from “ether and chloroform,” by Henry J. Bigelow, professor of surgery in the Massachusetts Medical College, a member of the American Academy of Arts and Sciences, the Boston Society of Medical Improvement, an honorary member of the Anatomical Society of Paris, corresponding member of Biological Society of Paris, and others:

“An impartial consideration of the question, ‘Who was the discoverer of ether insensibility to the pain of surgical operations?’ will be best attained by a previous consideration of the abstract question of discovery; reserving for its conclusion a special application of the principles illustrated by it to this special subject.

“Why was the discovery not made before? Why did no one discern the value of the exhilarating agent which had attracted the attention of so many?

“Because the human mind is fettered by long custom. It runs in the channels of routine. First diverted from its course by some little obstacle, its current swells and deepens, bearing down solid opposition that it may roll tranquilly in its distorted bed. Watch the tide of human footsteps, guided by the mind of successive generations. The pathway turns here and there to avoid some little inequality, and the old man and the child follow the winding track. Mind follows where mind has been. Few turn aside to analyze the difficulties which discouraged others. That a thing has not been, is, to most men, perhaps justly, a reason why it will not be; and here is the office of philosophic incredulity which doubts the track of custom.

“It is quite obvious that such incredulity may emanate from widely differing sources. It often grows out of depth and originality of intellect; of capacity which takes a wide and general view, discovering imperfection in mode or in material.

“On the other hand, as he who is ignorant of a path may make the shortest

route from point to point, so one who is not familiar with the erroneous conclusions of previous knowledge may first trace a true result. In such a case ignorance of error is an accidental vantage ground, which places its man considerably nearer truth than that occupied by prejudice based upon error.

"I hold that such incredulity, whether of knowledge or of ignorance, is likely to indicate a philosophic mind. It proposes to think for itself. Its experience of the world has shown it that the world may be wrong. Its experience of its own abilities has taught it to respect itself. For example, Whitney was said to form his decisions, not after the model of common opinion, but by his own nicely-balanced judgment. Perhaps in some details, humble though they be, such a mind has seen the defect of others' judgment, and has had cause to prefer its own results; and, thus instructed, turns to a new subject, determined to win its own experience, to make its own investigation.

"Such incredulity, brought to bear upon an extended system, especially in the inexact sciences, is justly viewed with suspicion; and the reformer in politics, in the social system or in medical science, meets no enthusiastic greeting. A little zeal, with a little error of premises or of reasoning, may then make the reformer dangerous. Here the *experimentum crucis* cannot easily be tried, either from the number of elements in the problem, from the length of time required, or from the magnitude of the interests at stake; and the world, therefore, very justly maintains a degree of conservatism and immobility in its moral, social, and political relations.

"In the exact physical sciences the tenets of a reformer may be easily tested. Here the logician easily supplies himself with facts. The result of single and brief experiments, made at will, can admit of little doubt. Even in the obscurer parts of medicine, where the material and immaterial influences are numerous and sometimes inappreciable, every honest and logical mind must, upon points of importance, arrive at one and the same result. No danger can result from incredulity in medical science. On the contrary, in view of the errors of fact which grow out of want of time or qualification on the part of observers, or the intrinsic difficulties of the science, a healthy and vigilant scepticism of recorded facts, whether in diagnosis or in therapeutics, is one of the essential methods of its advancement.

"It is quite obvious that such incredulity, such distrust of recognized authority, occupies a merely negative position. It is a quality which adapts its possessor for the reception of new light, from which the act of invention may emanate; but that such act should, in reality occur certain active faculties are requisite. Positive inventive talent is required, the nature of which I shall attempt to show. But let it be remembered that there is a partial substitute for talent. It has been said that the difference between men lies more in their power of application than in this quality. Great application, resulting from strong stimulus, will be readily allowed to bring about results much like those of talent. At any rate it is more nearly allied to the untiring zeal and stern energy which recognizes no obstruction to its march. It is well known that this unyielding perseverance has characterized a large proportion of inventors; it has animated them in failure and nerved them through adversity. Of Whitney, whose cotton gin, even fifteen years ago, was said to be demonstrably worth \$100,000,000 to the United States, it was said, 'of all my experience in the thorny profession of the law I never saw a case of such perseverance under such persecution. Even now, after thirty years, my head aches to recollect his narratives of new trials, fresh disappointment, and accumulated wrongs.' Fulton's energy was marvellous. His experimental boat was completed, after inconceivable difficulties, in the spring of 1803, when a messenger announced that the 'boat had broken in pieces and gone to the bottom.' After a momentary despondency, which till then he had never felt, and without returning to his lodging, without rest or refreshment, he labored with his own hands to raise her

during twenty-four hours incessantly. To this imprudence he attributed much of his subsequent bad health. The boat was almost entirely rebuilt, and was again completed in July. I take Fulton, Whitney, and Arkwright as types of the mechanical inventor. They possessed in an eminent degree the inventive talent; but this did not predominate over determination and perseverance, as not unfrequently happens when such talent is exaggerated. Of Whitney's power of invention it was said, 'it never ran wild; it accomplished, without exception, all that he ever asked of it, and no more. I emphasize this last expression from having in mind the case of a man whose inventive power appeared to be more fertile even than Whitney's; but he had it under no control. When he had imagined and half executed one fine thing he darted off to another, and he perfected nothing. Whitney perfected all he attempted.'

"Such energy, vital to the existence of most discoveries, may grow out of either the inventor's sense of necessity or his conviction of the possibility of reaching his object. And the last is another agent, mysterious to many, which is allied to the incredulity before alluded to, and which eminently characterizes the inventor's mind. It may be defined as a belief in the possibility or certainty of producing a result attained by the more active perception and reflection of the inventor's mind, by a series of processes which he may be, and often is, totally unable to impart. He is often, in consequence, considered as unsound or unwise, for, as far as the subject in hand is concerned, the inventor is actually ahead of the world. His faculties may not be recognized as stronger, his character more forcible, his intellectual range broader, nor his knowledge of experience greater than those of other men, yet for the narrow point at issue he is more competent than any other. His perceptions are stimulated and brought to a focus, and his energy is hot. He may actually become a better instrument for a special purpose than another whose intellectual mechanism is far more complicated. Franklin, in an essay before the American Philosophical Society, gave a drawing of a water-wheel, accompanied by a demonstration, conclusive, as he supposed, that such wheels could not be used to advantage in propelling steamboats. He proposed a jet from the stern. Fulton proved that among all methods proposed the jet was the worst, and the wheel the best. Fulton was right, and not Franklin.

"The power of remodelling old forms, of abbreviating method, of devising and economizing force for the passage of trodden or untrodden paths, appears to me essentially the same in most of the vocations of the human mind. Superadded to it may be a taste or a talent for the combinations of mechanical or other force, or for the complicated details of number and of space, or for any other of the fields of science. But how often is a mind simultaneously given to various inventive fields, exhibiting its powers in various directions, and intuitively recognized and stigmatized by the world as having a genius which incapacitates it for the daily routine of life. And how many, like Newton or Franklin, who added the element of perseverance to this genius, have been distinguished for a versatility of talent, manifesting itself each year in a new field, and exhibiting in each its peculiar trait. Franklin was a reformer, Fulton a warm advocate of the principles of free trade, while Whitney, in his college compositions, and in the words of his biographer, 'with a spirit somewhat prophetic, anticipated the decline and overthrow of all arbitrary governments, and the substitution in their place of a purely representative system like our own.'

"The inventor invents or devises the means to attain his ends. He is, therefore, most likely, other things being equal, to be a discoverer, because he will best devise the instruments, material or abstract, to cross-examine nature, and discover abstract truth. Yet it often happens that an inventive talent confines itself to the exposition of mechanical truths of limited application; not demonstrating large and suggestive laws in science, but settling limited ques-

tions of expediency in art; or making combinations, as Newton did his watch, for the intellectual pleasure of it.

"Such mechanical talent as that of Fulton and Whitney, and hosts of others, whose names are or are not attached to great inventions and discoveries, is not the less because it remained circumscribed by the field of mechanical force to which it first addressed itself. The modifications of mechanical force do in fact afford an ample field to such intellect. But give opportunity to such men as Fulton, or to a thousand nameless artisans, whose talent is valued at more than gold by those who convert such knowledge into money; find some way of detecting this humble genius, and give to it the opportunity for education in science and unmerchanted truth, which may take the place of natural strong taste for it, and the combination of the inventive talent with the scientific knowledge would yield the true philosopher. Newton built a watch, and, having a rare genius for arithmetic computation, discovered the law of gravitation.

"It is difficult to overestimate this talent for expedients and resources. What is American ingenuity? It is this great talent seeking a field in mechanical combinations in a country where opportunities for scientific knowledge have been hitherto comparatively rare. The elements of American ingenuity constitute the perception, the discrimination, and the resources of the American people.

"The true power of originating, wherever manifested, is the combined result of a power of analysis and a power of combination—the former enabling the inventor to discover the differences between the elements of existing combinations, to detect the influence of each, and to reject the useless; while the latter perceives the relations of new elements to the problem, and invokes their agency in the new combinations. The intellectual philosopher may justly recognize in these faculties the agency both of powerful judgment and of the imaginative quality; both brought to bear upon a range of subjects with which their possessor is familiar.

"It has been conceded that this talent is peculiar—often an uncultivated gift, brought to bear upon some narrow range of material, by those whose general knowledge does not testify to their industry or opportunities, or whose intellectual calibre and general range does not at all comport with this local development of talent in the direction to which taste has guided it.

"On the other hand, many discoveries important to the world owe little to this peculiar talent. They depend upon a fortunate or accidental succession of events, encircling a comparatively moderate ability; and then the magnitude of the invention may be much out of proportion to the degree of the inventive faculty. The invention of printing, perhaps the greatest in the scale of social importance, was but a division of the Roman printing block. Gunpowder, which happens to abbreviate warfare, was an unpremeditated invention. The discovery of Jenner has been attributed—1, to his talents; 2, to his education under Hunter; 3, to his situation in the vale of Gloucestershire.

"I would not abate a leaf of the laurel to which the discoverer has an undisputed right, and I shall presently indicate another quality, different from the inventive talent, which ranks high in intellect, and often compensates a discoverer for this talent. I wish here to show that a discovery of great practical importance may result in part from good fortune, from the first occupation of a ground, from perseverance in a particular direction, or from some other adventitious circumstance; that its magnitude and importance may be out of proportion to the character of the intellectual processes invested in it; and that it has happened that a discovery of immense practical importance to the human race, with good fortune to aid it, has involved but an inconsiderable intellectual pang in its creation, and, in consequence, that any *a priori* reasoning upon the mode of its creation has very little connexion with what may well be a question of pure fact.

"Having thus considered the intellectual qualities concerned in the invention,

I pass to the progress of the invention itself, and to a consideration of its successive steps. These consist, first, of the suggestion, and, second, of the generalization.

"Perhaps the most fertile source of error in the history of invention grows out of a misappreciation of these two stages of discovery. Yet they can be shown to differ widely, both in their character and in the credit they deserve.

"There can be no doubt that unless invention be a result of pure accident, suggestion always precedes it. It has been often distinctly recorded, in connexion with the greater inventions and discoveries. Thus the vertical spindles of an overturned spinning-wheel, suggested the jenny to Hargreaves. Iron-rolling suggested the drawing of cotton by rollers to Arkwright, who thus re-invented the machine, (ignorant of Wyatt's previous invention;) the valves of Fabricius, the circulation of the blood; and so on.

"In such cases the inventor or discoverer abstracted from the individual instance some inherent element, the applicability of which to other instances he alone saw. Hargreaves saw the value of a vertical position to spindles; Newton, of the force which attracted the apple; Harvey, of the idea that venous blood could run in only one direction; and they generalized this element in re-applying it.

"It does not modify the truth of this proposition that the first suggestion or experiment should yield a new result; that instead of a falling apple, it should be the contraction of a frog's leg, or an unmediated pustule on the hand of a Gloucestershire milkmaid. Such facts were still suggestions and not discoveries, and were new only in the aspect they received from the mind whose key-note they struck—new because attention was then first drawn to them in a new relation, and not new in their actual occurrence.

"And the suggestion varies in its suggestive power, both from its own character and from that of the mind it works upon. The apple fell, and Newton alone abstracted a principle in behalf of the moon. Horace Wells says, and I believe first, 'Reasoning from analogy, I was led to believe that surgical operations might be performed without pain, by the fact that an individual, when much excited from ordinary causes, may receive severe wounds without manifesting the least pain; as, for instance, the man who is engaged in combat may have a limb severed from his body, after which he testifies that it was attended with no pain at the time. And so the man who is intoxicated with spirituous liquor may be treated severely without his manifesting pain. * * * By these facts I was led to inquire if the same result would not follow by the inhalation of some exhilarating gas.' And it is well known that he tried the experiment, with various results, upon himself and others, in November, 1844. And yet the philosopher Seneca makes the remarkable observation: 'That which presses hard upon you, and is very urgent, if you begin to withdraw yourself will certainly pursue you and fall heavier. If, on the contrary, you stand your ground and seem resolved upon opposition, you will drive it from you.' How many strokes do boxers receive on the face and whole body! Yet a thirst of glory makes them regardless of pain.'

"To Seneca it suggested nothing, but to Wells a principle.

"A suggestion derived from one or two instances becomes an invention only when its important element is abstracted and actually reapplied; and it will be soon seen that the abstraction itself, the supposition, the theory, without this actual reapplication, amounts to nothing; and that for every actual and successful reapplication of a newly appreciated phenomenon there have been innumerable claims from those who suspected that such reapplication might be made, but did not actually make it; who mistook a single truth for a universal truth; suspicion for certainty; theory for fact.

"It will be found, by reference to the histories of discoveries, that the suggestion and generalization have occurred almost invariably in the experience of

one and the same individual. Though it is quite possible to conceive that while the suggestion occurred to one individual, he might transfer it for generalization to another individual, yet I am unable to find any instance in which this has occurred. On the contrary, the suspicion—the groundwork of the hypothesis—has generally stimulated and goaded the possessor, until he was able to convert it into fact. The suspicion has been then established, or, much more frequently, has not been established. It has proved erroneous; hope has not been realized, and the discovery has turned out to be no discovery. Watt, whose name is identified with the history of steam, and the soundness of whose practical views no one will dispute, speaks of ‘the cast of a die. For,’ says he, ‘in that light I look upon every project that has not received the sanction of repeated success.’

“This transfer of a suggestion, a theory, unconfirmed by fact, or relying upon one or two facts alone, is, as I have said, quite possible. It would then have the character of a ticket in a lottery which should be thus transferred, with which the recipient may draw a prize, but which is far more likely to turn up a blank.

“But especially in great discoveries, the theory has not been thus made over to a second party. The perceptions of the inventor, keen upon this point, have enabled him to discern its value, and he has allowed himself no rest, no interval, in the steady prosecution of his task.

“I have alluded to a second quality which contributes to discovery. The inventive talent lies at one end of the intellectual vibrations. At the other extreme is a high quality which elaborates another element, while the invention itself is the electric flash which results from the contact of the two.

“Here let me do ample justice to the mind of Jenner, which I do not find to have been especially characterized in his biography by the inventive genius. It did possess, as a equivalent, the power of appreciating the importance of a discovery; and it was in this power, and in the perseverance that resulted from it, and indicated it, that I recognize his chief merit. Jenner comprehended that vaccination would considerably prolong the average of human existence. A breadth of view, a simultaneous consideration of many circumstances, with ability to reason justly upon them; in short, a very clear conception of the whole subject, could alone afford the notion of importance or necessity which was to become the stimulus and proximate cause of the discovery. Few minds are capable of becoming so imbued with the importance of a merely possible result, as to permit it to divert the current of daily life. Such men are pointed at as having one idea; their wisdom is questioned; they are the butt of ridicule. And when the result demonstrates the accuracy of their convictions, we may fairly bow at once to their discernment and understanding, whether it detected a possibility or comprehended a necessity which others overlooked.

“At this point let us pause to make a distinction of cardinal importance. We have hitherto considered the qualities of the inventor’s mind, and the successive steps of the process by which it accomplishes its end. Another element now complicates the problem. The invention is to go forth to the world, and to establish certain relations between the world and the discoverer.

“Up to this point it is quite obvious that an invention may be made; that it may grow from an original hint into a theory, which again may be confirmed beyond a doubt by the test of repeated experiment, and yet that the whole process may be confined to the inventor’s mind—to his own cognizance. So long as he thus retains it for his own benefit or for that of a few friends, does the world stand in his debt? Clearly not. The demonstration of the world to an inventor is a demonstration of gratitude and honor—gratitude for the donation of a great invention, honor to intellectual ability. To the latter it is conceded in the case of certain astronomical discoveries, for example, not immediately concerned in the direct welfare of mankind, but the product of vast and recognized intellectual power.

"But when a discovery becomes great, not from the character of the intellect invested in it, but from its immediate applicability to the amelioration of the condition of humanity, then the gratitude and honor conceded by the world is a mere equivalent for value received. The world will not concede this gratitude until they have received the value. They will only concede it to the source through which they receive it, and they will examine very closely the claims of those who may claim to have acted as agents in the matter.

"To investigate this last position further: The world is to bestow a large reward in honor and in gratitude, but requires indisputable evidence of merit on the part of the recipient. It is prejudiced against *ex post facto* claims, because it naturally argues, first, that one who had made the invention, and appreciated it, would, in anticipation of this honor, grateful to all men, have published his invention when he made it; and secondly, that although such *ex post facto* claimant be a real inventor, yet he is so only in relation to himself, or those with whom he has communicated; and as he either could not, or did not, make the world at large feel the full value of it, so they owe him nothing. Such is ample reason for the world's prejudice against such claims.

"This suspicion of inventors, who do not appear until after the world has been made to recognize a discovery, is also justified by the remarkable fact that hardly an invention of importance was ever made known that it was not at once claimed, often simultaneously, from a variety of sources. It is perfectly natural that it should be thus claimed. The world, whether in science or in art, is built up to a certain point by the easy and wide transmission of knowledge, and upon this elevation stand a multitude of philosophers, engaged, often, in identical researches, and who will be possessed of much information upon the subject to which a discoverer first gives utterance. The world is then liable for a short time to confound their claims, to confuse the perfect with the imperfect knowledge; the incomplete result of few facts with the complete demonstration from many; the unproved with the indisputable; theory with fact. But the law of the land has left no doubt upon this point. Before ceding a patent it first identifies a discoverer. Here is an opinion from the ~~clear~~ head of Judge Story: "He is the first inventor in the sense of the act, and entitled to a patent for his invention, who has first perfected and adapted the same to use; and until it is so perfected and adapted to use, it is not patentable. An imperfect and incomplete invention, resting in mere theory, or in intellectual notion, or in uncertain experiments, and not actually reduced to practice, is not and cannot be patentable under our patent acts. In a race of diligence between two independent inventors, he who first reduces his invention to a fixed, positive, and practical form would seem to be entitled to a priority of right to a patent therefor."

"And the actual history of discovery and invention is conclusive upon these points. The world, if it has doubted awhile, has always been right in the end. The man who has first generalized the proposition, and first made the world allow that it was thus generalized, has been the inventor.

"About 1750 one Sultzer published an account of the peculiar taste arising from the contact of bits of silver and of lead with the tongue. Forty years after, Galvani brought metals in contact with a frog's leg. In each case a hint was received. Sultzer published it, but the world were not impressed with its importance. Galvani pursued the hint with numerous experiments; demonstrated that the phenomena resulted from a new modification of abstract force; compelled the world to recognize it, and was the discoverer.

"The young countrywoman at Sudbury said of small-pox, I cannot take that disease, for I have had cow-pox! The Duchess of Cleveland said she had no fear about her beauty, for she had had a disorder which would prevent her from ever catching the small-pox. Were these discoverers? No. They furnished the isolated hint, and made no further experiments. Jenner, with infinite en-

energy and perseverance, through many successive years, in spite of ridicule, at last proved, not that cow-pox might protect the system, but that it always would thus protect it, and that it was safe. He generalized the single fact, and was a discoverer.

"Many experimenters raised their voice to say that they, too, had wiped up acids with a towel, which had then burned like powder. Schonbein was the first to make the world allow that cotton, treated by a certain process, always would thus burn.

"The Abbe Nollet suspected the identity of the electric fluid and of lightning, and experiments were made in France. Franklin, braving the ridicule of failure, flew his kite, and by this and subsequent experiments with a lightning-rod, he proved that the electric fluid was thus identical.

"Adams made a calculation with regard to the existence of a new planet, and could not or did not compel the world, through the astronomer royal, to listen to him. Leverrier calculated a result, compelled the world to recognize its intrinsic greatness, and the magnitude of his own mathematical power, and was he discoverer.

"Jonathan Hull, the Abbe Arnauld, the Earl of Stanhope, Franklin, and others, proposed to propel boats by steam. They tried it, and failed to persuade the world of the expediency or value of the method. Long after, Fulton, impressed with the immense importance of the subject, made a series of experiments and calculations, discerned the cause of previous failures, persevered through inconceivable difficulties, and in the face of ridicule he felt but did not yield to, demonstrated a proposition—not that steam, a long-recognized power, might be made to move a boat, but that it could do so efficiently and profitably. He first compelled the world to recognize this great fact, and was the discoverer of this abstract truth, and the inventor of a profitable steamboat.

"A hundred other instances might be cited to show that the man to whom the original hint occurs is not the inventor; nor yet he who forms a theory upon his hint; nor even he who publishes this theory, if he does not convince other people of its truth. This last may readily occur. A man may happen upon a fortunate theory, and yet not appreciate its value, so he gives himself no trouble to proclaim it; or perhaps his proofs are not conclusive, and the world will not believe. Goethe knew this when he said, 'Many things may be discovered and made known for a long time without producing any effect on the world, or the effect may be wrought without its being observed—wrought and yet not take hold of the multitude. This is the reason why the history of inventions is so surrounded with strange riddles.'

"He is the inventor who generalizes the single instance, and who makes the world concede that it is thus generalized.

"Now, if there is any one point which has identified the true inventor's mind, has been an invincible determination to compel the world to recognize the reality and value of its invention. The inventor saw it himself when other men could not, and he determined that other men should see it, and he accomplished his determination. 'He,' Sidney Smith says, in the *Edinburgh Review*, 'is not the inventor who first *says* the thing, but he who says it so long, loud, and early, that he compels mankind to hear him.'

"Recognize this point, and the question of invention is comparatively simple. Let it not be recognized. There is no abatement of claims to previous invention. The writer of a life of Fulton well says: 'Those who question Mr. Fulton's aim are precisely those who have been utterly unsuccessful in their own attempts; and it would seem that exactly in proportion as their efforts were abortive, and as they had thrown away money in fruitless experiments, their aims rose in their own estimation, and that of their partisans.' And the witness, I believe before the House of Commons, probably did not overstate the matter when he gave it as his opinion that if a man were to show that he had

found a road to the moon, his neighbors would testify that, if they had not been there themselves, they knew several individuals who were familiar with the road in question.

"The above considerations have been presented with the intention and desire of exposing the authority of precedent with impartiality. I have wished that the reader should not lean to one or the other side of the ether controversy, until all these considerations were presented. It remains to show their bearing upon the gist of the evidence contained in the statements which have been made in behalf of Dr. Jackson and of Dr. Morton. The considerations alluded to bear upon four principal points:

"1. The character of the mind and education required for discovery.

"2. The suggestion of the discovery.

"3. The generalization of this suggestion.

"4. Its presentation to the world.

"1. This community is familiar with the great scientific talent and attainment of Dr. Jackson. Dr. Morton has acuteness, ingenuity, zeal, and perseverance. The discovery is not of a character to have demanded extensive scientific acquirement, and it is probable that either Dr. Jackson or Dr. Morton might have made it.

"2. The suggestion occurred to Davy, Jackson, Wells, Morton, and many others. Horace Wells seems to have conceived this hypothesis more distinctly than any other individual. So persuaded was he of its probability that he made several experiments, and even made a journey to the Medical Class at Boston, before whom, however, he entirely failed to verify his theory. He then abandoned it, until it was confirmed by Dr. Morton. Dr. Jackson fails to prove that Dr. Morton was ignorant of the hypothesis, until he suggested it to him, because Dr. Morton shows by the evidence that he was considering the properties of ether, at the intervals both of three months and of three days, before his interview with Dr. Jackson.

"3. I have shown that he who verifies the suggestion is the real discoverer. Dr. Morton, according to the evidence, did generalize this discovery. He verified the suggestion, from whatever source it emanated. He made and modified the experiments at his own discretion. He assumed the responsibility of danger. He first conclusively demonstrated of ether—first, that it would always produce insensibility to pain; second, that it was safe. These two points constitute the discovery. Dr. Morton demonstrated these points, and no one else did.

"To show that Dr. Morton was only a "nurse"—an instrument of pre-established knowledge—such knowledge must be proved to be pre-established. It is impossible for human reason to infer, upon the experiments put in evidence by Dr. Jackson, either that ether was, first, universal in its effects, or, second, that it was safe. It must, therefore, be argued that this knowledge was not pre-established; that Dr. Morton was not a mere administrator, but that he was an originator.

"4. Lastly, many may have been the real discoverers of ether insensibility to pain, and at a remote period. But if so, they have kept it to themselves, and they will be known as discoverers only to themselves. The world has always honored that individual, among such discoverers, who presented his discovery to them. Dr. Morton was, according to the evidence in print, both the prime mover and the immediate agent in the introduction of this discovery to the world."

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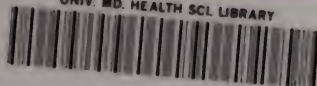
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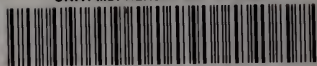
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